THE EVOLUTION OF INTERNATIONAL RESTRAINTS ON CHEMICAL WEAPONS AND LAND MINES : THE INTERPLAY BETWEEN INTERNATIONAL HUMANITARIAN LAW AND ARMS CONTROL

Maria Elena Powell

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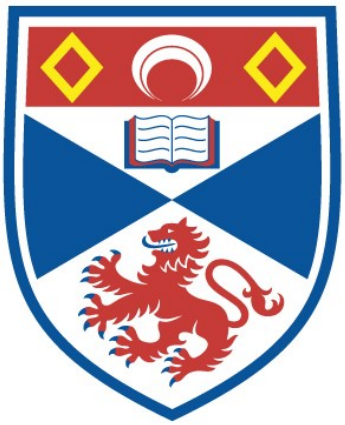

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by

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To my family

ABSTRACT

Weapons are acquired to protect the national security interests of the state: they may be used to settle disputes between one state and another, or they are accumulated as a defensive precaution to dissuade any future or offensive military action. Quite often, weapons are used in great quantities in various internal conflicts to the detriment of the individual, both civilian and combatant. Over time, the international community has developed certain humanitarian principles, norms, treaties and control mechanisms to reduce tensions between states, and to lessen the consequences of unrestrained weapons use. International Humanitarian Law (IHL) or the Law of War seeks to regulate or prohibit the use of particular weapons based on the principle that the means of injuring one's enemies are not unlimited, and that there should be restraints on weapons which are indiscriminate or cause unnecessary suffering. Arms control and disarmament law seeks to limit or even prohibit the use, transfer or trade, production, and stockpiling of certain weapons. There is an interplay between these two approaches when the weapon in question is being restrained because of its perceived nature. Two weapons that have evoked calls for prohibition or restriction because of their pernicious nature are chemical weapons and land mines. Currently, in the Post-Cold War security environment, both these weapons are high on the international political and security agenda rendering them relevant subjects for a comparative study. This thesis examines the respective histories of these regimes of restraint and attempts to determine what lessons may be drawn in comparing efforts to place legal prohibitions on so-deemed inhumane or intolerable weapons. By examining the main similarities and differences in responses to chemical weapons and land mines, it may possible to understand what criteria are necessary for prohibiting a weapon on humanitarian grounds.

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ACKNOWLEDGEMENTS

The process of completing a Ph.D. dissertation requires a measure of tenacity which is matched only by the exhilaration of the task.

To my parents Keith and Ula Powell, I offer my grateful thanks; without their enduring love and unwavering financial support this degree would not have been possible. To my brother Marc, thank you for the love and attention which transcends the miles. It is very reassuring to know that our relationship is strong, whether we are together or apart. To my grandfather Harry Ramsaroop whose lifelong dedication to humanitarian matters has made this project all the more relevant. He still finds time to be interested and supportive of his grand-daughter's work. To my Aunt, Pamela Ramsaroop who treats me like a daughter and whose London home is a home away from home. Also, to my Aunt Kella Ramsaroop who has always been supportive and enthusiastic of my work. Their constant interest, and pride in my work has always given me an incentive to succeed.

Without the diverse knowledge, encouragement and unwavering support of my supervisor, Professor Paul Wilkinson the task would have been impossible. To David Gowdey, formerly of the UN Department of Humanitarian Affairs, I am indebted for his encouragement and sound advice during that UN internship which enabled me reformulate my thesis. David facilitated my attendance at the Third Group of Experts Meeting in Preparation for the Review Conference of the Inhumane Weapons Convention in Geneva, and this proved to be a watershed in the progression towards my ultimate goal. I must acknowledge the late Linda Hazou, Senior Humanitarian Affairs Officer at UNDHA. I was, indeed, privileged to have worked for so dedicated a person, whose knowledge of the UN was so extensive. My thanks are also due, in no small measure, to W. Hays Parks, Special Assistant for Law of War Matters in the Office of the Judge Advocate General, whose insight and willingness to spend so much time in discussion with me, despite his busy schedule, was of inestimable value.

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GLOSSARY

ACDA	**Arms Control and Disarmament Agency (U.S.)**
AG	**Australia Group**
AP	**Anti-Personnel Mines**
AT	**Anti-Tank Mines**
BTWC	**Biological and Toxin Weapons Convention**
CBM	**Confidence Building Measure**
CBW	**Chemical and Biological Weapons**
CCD	**Conference of the Committee on Disarmament**
CCW	**Convention on Conventional Weapons**
CD	**Conference on Disarmament**
CW	**Chemical Weapons**
CWC	**Chemical Weapons Convention**
COCOM	**The Coordinating Committee for Multilateral Export Controls**
CRS	**Congressional Research Service (U.S.)**
DHA	**Department of Humanitarian Affairs (UN)**
DOS	**Department of State (DOS)**
DPKO	**Department of Peacekeeping Operations (UN)**
ENDC	**Eighteen Nation Disarmament Conference**
EIF	**Entry Into Force**
FCO	**Foreign and Commonwealth Office**
FSU	**Former Soviet Union**
HRW	**Human Rights Watch**
IAEA	**International Atomic Energy Agency**
ICRC	**International Committee of the Red Cross**
IHL	**International Humanitarian Law**
LCP	**Land Mine Control Programme**
MOU	**Memorandum of Understanding**
MTCR	**Missile Technology Control Regime**
NAA	**North Atlantic Assembly**
NATO	**North Atlantic Treaty Organization**
NF	**New Forum**
NNWS	**Non-Nuclear Weapons States**
NSD	**Non-Self-Destructing (Mine)**
NSG	**Nuclear Suppliers Group**
NPT	**Nuclear Non-Proliferation Treaty**
NWS	**Nuclear Weapons States**
OPCW	**Organization for the Prohibition of Chemical Weapons**
OTA	**Office of Technology Assessment (U.S. Congress)**
PTS	**Provisional Technical Secretariat (of the OPCW)**
PREPCOM	**Preparatory Commission (of the OPCW)**
SIPRI	**Stockholm International Peace Research Institute**
SD	**Self-Destructing (Mines)**
SDA	**Self-Deactivating (Mines)**
SN	**Self-Neutralizing (Mines)**
UXO	**Unexploded Ordnance**

UN	**United Nations**
UNSCOM	**United Nations Special Commission**
WA	**Wassenaar Arrangement**
WMD	**Weapons of Mass Destruction**

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Chapter I-Introduction

Throughout history, states have been reluctant to accept limitations upon their capabilities to wage war. Once a weapon has been introduced into the arsenal of a state or put to extensive use, states are reluctant to relinquish them. Paradoxically, as technological advances have made war more deadly and indiscriminate, nations and individuals across the globe have recognized that the means and methods of waging war should not remain unlimited. With this recognition have come demands for the restriction or abolition of certain weapons. As a result, a tension exists between these two competing interests, which makes the regulation or abolition of particular weapons all the more difficult. It is this tension which encompasses some of the basic ideals of what is commonly known as International Humanitarian Law (IHL) or the Law of Warfare.[1] From these conventions come the basic laws and rules concerning the distinction between combatants and non-combatants, belligerents and neutrals, military and civilian targets, and the permissibility or legality of a particular weapon. The debate over the legality of particular weapons incorporates the tenets of both IHL and arms control and disarmament. Two weapons which have evoked responses of prohibition or restriction owing to their odious nature are chemical weapons and land mines. This study will examine the evolution of regimes of restraint and prohibition

[1] According to Michel Veuthey, "The terminology used to refer to these international treaties may vary (humanitarian law, international humanitarian law applicable in armed conflicts, law of Geneva, Red Cross Conventions, law of the Hague, human rights in armed conflict), but all seek the same objective—namely, to limit the use of violence. Some of these instruments, like human rights treaties, are based on a peacetime approach, while others, such as humanitarian law, are normally applicable during armed conflicts. Yet their scope often overlaps, especially as regards the fundamental rights they embody." See Michel Veuthey, "The Contribution of International Humanitarian Law to the Restoration of Peace", in Kevin Cahill, (ed.), A Framework for Survival Health, Human Rights, and Humanitarian Assistance in Conflicts and Disasters, (New York: Basic Books and the Council on Foreign Relations, 1993).

and attempt to determine what lessons may be drawn in comparing efforts to place legal prohibitions on so-deemed 'inhumane' weapons.

Section 1.1-Reason and Objectives for Study

To a certain extent it might appear that the histories of these two weapons systems, and efforts to restrain their use, development, and proliferation, are distinctive to each weapon. Regardless of these differences, both weapons do share one common bond: attempts at their regulation originate from the nature and effects of the weapon. The shaping of these regulations involves an interplay between political, military, public interest and humanitarian variables: today, land mines and chemical weapons provide the most pertinent examples of how the humanitarian element affects the establishment of arms control and disarmament policies.

The notion of restrictions or prohibitions on weapons based on their nature has been a neglected area of arms control. During the Cold War, arms control remained exclusively in the realm of superpower politics. Most arms control agreements involved quantitative disarmament rather than qualitative disarmament. With the exception of the Biological and Toxin Weapons Convention (BTWC) of 1972, and more recently the Chemical Weapons Convention (CWC) of 1993, no agreements were negotiated prohibiting specific weapons categorically.[2] Although there has always been a moral opprobrium against nuclear weapons, for strategic reasons there is little chance of these weapons being banned completely as a weapon system. During this Cold War period, IHL controls on weapons were also neglected, which

[2] Other arms control agreements have eliminated sub-categories or particular models of weapons but never an entire weapon system besides biological and chemical weapons.

was all the more detrimental, as conventional weapons were used with alarming intensity and frequency in numerous low-intensity conflicts.

In the current international security environment, however, two interdependent conditions prevail which make these case studies relevant. First, the Cold War has ended, creating an environment more conducive to multilateral arms control negotiation.[3] As Ivo Daalder explains:

> The end of the Cold War has settled many problems, but it has also stimulated the need for new thinking in arms control and other areas. New arms control opportunities have emerged, as have challenges that were previously subordinated to the dynamics of the Cold War.[4]

Second, security concerns are focusing on the numerous low-intensity conflicts around the world as well as on the proliferation threat from Weapons of Mass Destruction (WMD) which could be used by unstable actors in the international system. The Chemical Weapons Convention (CWC) reflects a new stage of co-operation and universality in the prohibition of a particularly abhorrent weapon. This treaty recognizes the security threat from the proliferation of this particular WMD. The use of chemical weapons during the Iran-Iraq War, the gassing of the Kurds, the spectre of chemical warfare during the Gulf War, and the Tokyo Subway Sarin gas attack are

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[3] There is an opposing viewpoint which argues that the end of the Cold War has actually complicated the prospects for peace and security. In an overarching bipolar system, the superpowers maintained a form of structure and control over the international system. They also drove and shaped the arms control process. In the current security environment, there are no Cold War tensions to mask the simmering security problems within the international system. As a result, the system may become more anarchical with more players striving for power. At the same time, the thawing of relations between these two powers has lead to revised threat assessments and more co-operation between them concerning arms control matters. While there is a risk that co-operation may be more difficult to achieve if more players are involved in the process, the fact that there are more players actively involved in the arms control process is important, as it allows relevant issues to be debated without Cold War politics interfering. It is also important to note that Russia and especially the United States still have some of the largest and deadliest arsenals in the world, and have the political clout to significantly influence the arms control process world-wide.

[4] Ivo Daalder, "The Future of Arms Control", Survival, Vol. 34, No. 3, Autumn 1992, 70. N.J. Rengger had also noted that : "...the practice and the theory of arms control have, therefore usually subordinated the interests of 'international society' to that of the interests of particular members of it." See N.J.

ominous reminders that the international norm against the use of chemical weapons has weakened, and that firmer measures have to be instituted—hence the relevance of a multilateral, non-discriminatory, universal disarmament regime. The numerous low-intensity conflicts around the world have also demonstrated the consequences of uncontrolled conventional weapons use. The unrestrained use of land mines has had a devastating impact on civilians and the environment; these effects can no longer be ignored. Therefore, the current salience of both land mines and chemical weapons on the international political and security agenda renders these weapons as prime subjects for joint case studies. A comparison between these two seemingly different weapon systems can elucidate the multiplicity of concerns and the difficulties that must be considered in formulating multilateral restraints on particularly heinous weapons. Moreover, a comparison between these two weapons emphasizes the differences and difficulties in promoting selective and comprehensive disarmament.

Section 1.2-Method and Structure of Study

Case study analysis will be the main method of investigation for this study. Producing two case studies has the advantage of illustrating what variables must be present or are predominant in the level of restraints or prohibitions placed on these weapons. A historical case-by-case examination of the evolution of restraints on abhorrent weapons reveals that there are precedents for restraints on weapons. A comparative analysis may also indicate whether these models of restraints have wider applications for future arms control endeavours. Finally, a comparative method can demonstrate

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Rengger, "Arms Control, International Society, and the End of the Cold War", Arms Control, Vol. 13, No. 1, April 1992, 41.

whether these regimes of restraint or prohibition reflect the changes of the international security order, or are unique occurrences.

This study will be divided into two distinct sections of threat and response, followed by a conclusion. The threat section will examine the histories of chemical weapons and land mines through an exploration of their military functions, proliferation, production, the context of their usage, and the communities affected. This section will conclude with an analysis of the threats posed by these two weapons. Also, by examining the typology of these weapons, it is possible to analyse what factors are or should be present for deeming these weapons 'inhumane' or 'intolerable'. The next major focus of this study will concentrate on the variety and depth of responses accorded to these particular weapons. This section will focus on collective or alternative restraints, and existing treaties as well as historical precedents. Collective restraints include control regimes, moratoria, unilateral/national restraints and bilateral agreements. Restraints on weapons can take a variety of approaches which are not exclusive, but which over time may be complementary. Sometimes the implementation of these alternative measures are more practical and expedient, and can serve as temporal building blocks until more comprehensive measures can be arranged. Finally, the area of response that will be most closely examined are the treaties applicable to these weapons: The Chemical Weapons Convention (CWC) and the Convention on Conventional Weapons (CCW). Treaties are important, as they represent the pinnacle in successful arms control negotiation. The fact that a treaty exists demonstrates that the international community recognizes that restraints on the weapon in question are necessary. The history of both treaties will be examined and

their main points critiqued to determine exactly how far states have been willing to go in placing restrictions or prohibitions on their weapons.

Finally, this study will analyse the similarities and differences between the threat inherent in and the responses to these weapons, and draw some conclusions from these lessons. This section will seek to address what, and how large, a role the military establishment plays in establishing prohibition regimes by looking at how the responses to chemical weapons and to land mines differ. How much influence does politics or the political climate have on regimes of restraint? How do commercial interests affect weapons regulations? What role do states, institutions, and the media play in restrictions or prohibitions on these weapons? What degree of interest and influence do these other actors exert on the state in weapons policy regulation? Finally, the role and influence of IHL in establishing restraints on these two weapons presents an interesting comparison that encompasses all the preceding factors. Why have both these weapons met with the particular responses they have? Are the difficulties encountered in declaring a weapon illegal endemic to the arms control and disarmament process, or are other factors now exerting more influence in these processes?

This study will seek to address whether a realist approach can still satisfactorily explain the restraints on these two weapons, or whether other approaches are gaining ground. Traditionally, arms control policies have been ruled by a realist dynamic. The humanitarian element in arms control policy has been eclipsed by the political and strategic interests of the time. The right to bear arms is the right of the sovereign state, and therefore the state must do what is in its best interest to ensure its own

security. States have always been aware of the destruction their weapons can cause, but they choose to exercise restraint in their weapons policies when such restraint is in their own interest. That is realism. At the same time, however, the IHL approach to weapons policies should not necessarily be viewed as the antithesis of realism. According to Jacques Meurant, IHL "...is a mixture of both realism and idealism."[5] For the mutual benefit and protection of all parties, the IHL approach acknowledges the destructiveness of conflict but seeks to ameliorate its consequences. IHL measures seek to place restraints on actions or weapons that are the most damaging. It is one of the goals for this study to take into account both realist and normative/legalistic approaches in seeing which ones really influence or predominate within weapons control policies.

There has also been a real-time approach to this study which has benefits and limitations. The politics of treaty ratification, shifting policy positions and the review process of the CCW constitute rather fluid and unsettled issues. Therefore April 1996 is the cut-off period for this study. Should any relevant or new information come to light during the editing period, every effort will be made for its inclusion. States may have changed specific policies after this date. Still, it is the process of change and its analysis, which provides the primary focus for this study of the evolution of weapons restraints.

[5] Jacques Meurant, "Inter Arma Caritas: Evolution and Nature of International Humanitarian Law," Journal of Peace Research, Vol. 24, No. 3, 1987, 247.

Section 1.3-Literature Review

There is not a great deal of academic literature which specifically explores the evolution of restraints on these particular weapons on a comparative basis. or in-depth studies of the interplay between IHL and arms control and disarmament—hence the relevance of this study. Most academic arms control literature has focused on strategic, nuclear, theoretical, scientific and technical issues. Works on specific weapons other than nuclear weapons have not been as prolific. Most IHL literature was to be found in the annals of international law, rather than in the broader realm of international relations. There has been the criticism that:

> For too long humanitarian law has remained unknown except to a comparatively small number of specialists and, as will be seen when reading the contributions, this is an intolerable state of affairs.[6]

Writers of contemporary strategy have also shown little interest in legal issues relating to the use of force. Adam Roberts observes that:

> For reasons which are understandable but not altogether convincing, there has in the post-1945 era been a tendency, stronger perhaps in writers on strategic matters than in those concerned with the implementation of policy, to view many legal issues relating to the use of force as arcane.[7]

This study will use primary source material such as briefings, legal documents, reports, treaties, interviews, first-hand observation by the author, and informal discussions. Technical information, documentation and informed discussions gained from the U.S. Arms Control and Disarmament Agency, the United Nations and the International Committee of the Red Cross (ICRC) all proved to be useful and vital resources. As a good deal of arms control information comes from government sources, it should be remembered that this information may be presented from a particular viewpoint. Governments may have their own agendas to present.

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[6] "Preface", Journal of Peace Research, Vol. 24, No. 3, 1987, 213.

Similarly, sources from NGOs or other humanitarian organizations may also have their own agendas as well. Keeping in mind all these agendas, it is hoped that by using both types of source material, a fair-minded, honestly representational balance can be struck. Secondary sources used in this study include books and journal articles, mostly by experts in the field, which are helpful as background material in understanding IHL and some of the intricacies of weapons control. Tertiary sources include newspaper reports and articles from journals such as Arms Control Today and Disarmament Diplomacy, which have provided source material which has kept the study as up-to-date as possible.

Although chemical weapons did not elicit as much attention on the arms control agenda as nuclear weapons, renewed fears about proliferation of these weapons, and the establishment of the CWC has led to a revived interest in these weapons and hence more debate. Previously, most of the work on chemical weapons was produced by think-tanks or strategic information groups such as the Stockholm International Peace Research Institute (SIPRI), and Julian Perry Robinson and the Harvard-Sussex Information Bank on CBW Warfare. The debates on chemical threat and control issues are found mostly in the form of monographs and essays on the subject.[8] Most useful are the works edited by Brad Roberts of the Center for Strategic and International Studies (CSIS), Washington, which examine and debate chemical weapons arms control issues. For example, Ratifying the Chemical Weapons

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[7] Adam Roberts, International Law and the Use of Force: Paper 1, International Institute for Strategic Studies, London, Adelphi Papers, No. 266, 1991-1992, 53.

[8] The following authors offer some interesting insights on chemical weapons issues: Kathleen Bailey, "Problems with a Chemical Weapons Ban", Orbis, Spring 1992, Elisa Harris, "Towards a Comprehensive Strategy for Halting Chemical and Biological Weapons Proliferation", Arms Control, September 1991, Nicholas Sims, "Commonwealth Reservations to the 1925 Geneva Protocol 1930-92",

Convention[9] is a valuable work as it examines the CWC through the opinions of a variety of experts. This study is important and useful because if presents a balanced perspective of chemical disarmament issues.

In comparison to chemical weapons land mines have attracted even less attention, especially in the arms control field. Most literature was confined to military manuals or excerpts in law of war literature. According to Lieutenant Colonel Burris Carnahan:

> Until recently, international law gave little guidance on the proper use of land mines and booby traps in armed conflicts....Similarly, and in contrast with more controversial arms such as poison gas, napalm and nuclear weapons, the land mine has attracted almost no attention from writers on the law of armed conflict.[10]

It is doubtful that the average citizen was aware of the Convention on Conventional Weapons, let alone what it was about. Since the early 1990s, however, the land mine crisis has become impossible to ignore, resulting in an increase in the land mine literature. Opinion pieces and advocacy campaigns, government sources, international organizations and NGO literature as well as the media all contribute to this body of literature. Most of this has focused on the land mine crisis and proposed solutions to it, but detailed discussions of the difficulties in transforming IHL restrictions into firmer arms control or even disarmament measures have not been as forthcoming, or have been rather vague whenever they have been discussed.

The Round Table, No. 324, 1992, Amy Smithson, "Implementing the Chemical Weapons Convention", Survival, Spring 1994.

[9] Brad Roberts, (ed.), Ratifying the Chemical Weapons Convention, (Washington: CSIS, 1994). Most of Robert's work is available in CSIS's Significant Issues Series. Other relevant works by Roberts include the following: Brad Roberts, (ed.), The Chemical Weapons Convention: Implementation Issues, (Washington: CSIS, 1992), Chemical Disarmament and U.S. Security, (Boulder: Westview Press, 1992), "Chemical Disarmament and International Security", International Institute for Strategic Studies, London, Adelphi Papers 267, Spring 1992.

Probably, the most comprehensive land mine studies for any region are produced by the non-governmental sector. The 'bible' of these studies is Landmines: A Deadly Legacy by Human Rights Watch, a work referred to constantly by most authors.[11] Its utility as a reference source is invaluable as it is the first major work to cover all aspects of the land mine crisis and responses proposed to end it. This study also includes initiatives and developments in international law and the reproduction of key texts. While it must be remembered that this publication is produced by an NGO with an anti-mine agenda, A Deadly Legacy still remains a reliable reference; the information is very detailed, and more importantly, it is well documented. Another useful source is a report by the ICRC from its Montreux Symposium on Anti-Personnel Mines.[12] This symposium brings together experts from the legal, medical, military and other professional fields to debate all aspects of the land mines issue. Clearing the Fields Solutions to the Global Land Mines Crisis[13] sponsored by the Council on Foreign Relations and the Center for International Health and Cooperation also uses the symposium format with experts debating the major issues of the land mine dilemma from a variety of perspectives. Both these publications are very useful as reference sources which explain clearly, and from all sides, the major land mine issues. Although, these publications emanate from symposia with humanitarian-interest overtones, they still include a range of perspectives on the land mine issue. In addition, there are also two forthcoming studies from the ICRC (AP

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[10] Lieutenant Colonel Burris Carnahan, "The Law of Land Mine Warfare: Protocol II to the United Nations Convention on Certain Conventional Weapons", Military Law Review, Vol. 105, 1984, 73.
[11] The Arms Project of Human Rights Watch and Physicians for Human Rights, Landmines: A Deadly Legacy, (New York: Human Rights Watch and Physicians for Human Rights, 1993).
[12] See ICRC, Symposium on Anti-Personnel Mines, ICRC Report, Montreux 21-23, April 1993.
[13] The Center for International Health and Cooperation and the Council on Foreign Relations sponsored a symposium of experts on the global land mine crisis which is used as the basis for this book. See Kevin Cahill, (ed.), Clearing the Fields Solutions to the Global Land Mines Crisis, (New York: Basic Books and Council on Foreign Relations, 1995).

Mines: Friend or Foe?) and the Centre for Defence Studies, Kings College, University of London, (Military Utility of Land Mines)[14] which may well become influential. Both studies are reported to tap the opinions and expertise of senior military personnel in support of the idea that mines are now of marginal utility militarily.[15]

Most IHL authors have discussed weapons controls usually as part of a wider discussion of IHL on the means and methods of warfare. Military lawyers have also contributed to the literature on weapons controls as a product of their legal discourse. The divisions in scholarly and technical writing between IHL and arms control and disarmament are perhaps intrinsically artificial, and it is an area that needs to be explored further. Nevertheless, there are a few key articles that explore the links between these subjects. The most salient article is "International Humanitarian Law and Arms Control" by Daniel Frei.[16] The major question Frei's article seeks to address is to what extent should IHL be considered a contribution to arms control. Frei acknowledges that the relationship between IHL and arms control and disarmament measures has often been overlooked and suggests that more effort should be made to define the relationship between the two. He concludes that IHL is indeed a legitimate part of the arms control process and is not contradictory to the goals of arms control and disarmament. Ove Bring also takes a similar position regarding the relationship between IHL and arms control and disarmament in the article "Regulating

[14] These studies are supposed to be published by the middle of 1996.
[15] John Davidson and Hugh McManners, "Landmine Reports Challenge UK Stance", *The Times*, 24 March 1996, 21, and Michael Binyon, "Red Cross Study Questions Military Value of Weapon", *The Times*, 29 March 1996, 15.
[16] Daniel Frei, "International Humanitarian Law and Arms Control", International Review of the Red Cross, No. 267, November-December 1988, 503. Frei was a Professor of Political Science at the University of Zurich, a specialist on disarmament, neutrality, and international co-operation, and a member of the ICRC.

Conventional Weapons in the Future—Humanitarian Law or Arms Control?"[17] In "Arms, Armaments and International Law", Frits Kalshoven, the Dutch jurist traces the development and use of particular weapons and the restraints upon them through both IHL and disarmament law. He concludes that despite the difficulties in the weapons control process, both types of law are important, and both should continue to be improved and developed. The value of this work is that it examines how weapons control policies have to interact with the politics and processes of the international system.

Section 1.4-What is International Humanitarian Law?

To comprehend how international humanitarian law (IHL) or its predominant ethos has influenced the arms control process, and how it affects a comparative analysis of two controversial weapons regimes, it is necessary to provide a brief résumé of its history and fundamental principles. IHL seeks to avoid total inhumanity in warfare by limiting the means and methods of warfare and protecting the rights of individuals, both civilian and combatant. Technically, IHL can be subdivided into specific tenets: the Law of the Hague, the Law of Geneva, and the Law of New York. The Law of the Hague relates to the conduct of warfare through limitations upon its means and methods; the Law of Geneva governs the protection of victims of armed conflict; the Law of New York concerns the preservation of human rights in armed conflict.[18]

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[17] Ove Bring, "Regulating Conventional Weapons in the Future—Humanitarian Law or Arms Control?", Journal of Peace Research, Vol. 24, No. 3, 1987.

[18] For a succinct discussion of these three trends in IHL, see Frits Kalshoven, Constraints on the Waging of War, (Geneva and Dordrecht: ICRC and Martinus Nijhoff Publishers, 1987), 9-23. See also Allan Rosas, "The Frontiers of International Humanitarian Law", Journal of Peace Research, Vol. 24, No. 3, 1987, 221.

To a certain extent, IHL itself seems paradoxical; war by its nature is not a benevolent endeavour, therefore attempts at its humanitarian regulation may be an exercise in futility. Rules of conduct negotiated during times of peace may not withstand the stresses of conflict. Once war has broken out, legal restraints may have already broken down, preceding a further deterioration of the rules.[19] In the heat of battle, for example, combatants may ignore the guidelines they once accepted in order to achieve victory on the battlefield. In spite of this criticism, IHL still enables states to respect mutual agreements which ameliorate the horrors of war. According to Antonio Cassese, IHL is a "...policy of lesser evil which ultimately pays dividends since humanitarian and political concerns are not incompatible."[20] Mutual benefits may include factors such as protection of field hospitals, treatment of prisoners of war, and the restricted or prohibited use of weapons which both sides abhor. Belligerents are more prone to co-operate when they can each see a mutual benefit to observing these rules.

In the aftermath of World War II, scant attention was paid to the development of IHL as war was technically outlawed and international organizations such as the United Nations were supposed to keep the peace.[21] Any control on weapons was relegated to the jurisdiction of superpower politics. By the 1960s, however, there was the realization that numerous small conflicts were not being contained and that civilians were being caught in the crossfire. As a result, attention began to be focused upon

[19] Jozef Goldblat makes this point concerning one of the weaknesses in the Law of Armed Conflict. See Jozef Goldblat, Arms Control: A Guide to Negotiations and Agreements, International Peace Research Institute (PRIO), Oslo, (London: Sage Publications, 1994), 200.
[20] Antonio Cassese is quoted in an article by Jacques Meurant, op. cit., 247.

human rights and measures to reduce human suffering. Since the 1960s, the unprecedented scrutiny of media organizations brought the destructiveness of war and human suffering to the public in many nations. Many special interest groups have become involved in the issues of war and peace, human rights, humanitarian aid and development, as well as concerns for the environment. In addition, the gap or distinctions between the various IHL traditions began to narrow in this period as well. The ICRC which was traditionally more concerned with developments in Geneva Law, eventually recognized the importance of the overlap with the other areas of IHL.[22]

Although throughout history, the modern codification of IHL comes primarily from a Western perspective, there have been many sources of inspiration for restricting the means and methods of warfare.

> The historical sources of humanitarian law are universal and timeless. Throughout the history of humankind, all civilizations have developed rules within the group, tribe, nation, civilization, and religion to ensure its survival—in Asia, Buddhism, Hinduism, Taoism, and Bushido; in the Middle East, Judaism, Christianity, and Islam; in Africa, a multitude of customs valid only within a given tribe; in Europe, the mutual restrictions imposed by chivalry, before the condottieri and lace-clad war generals were supplanted by the humanists (Grotius, Hobbes, Kant, Pufendorf, Rousseau, Vattel, Henry Dunant, and Francis Lieber)—all aiming to avoid excesses that would turn clashes into anarchy and hence make peace more difficult to achieve.[23]

From this diversity of cultures and ages also comes particular perceptions of what can be considered humane or inhumane. Both soldiers and civilians may have the same humanitarian concerns, or under particular circumstances, one groups' concerns may

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[21] It was thought that the maintenance of peace and the regulation of conflict were two incompatible goals. Meurant points out, however, that this opinion failed to take into account that there were no safeguards against states waging war or any other aggressive military actions. Meurant, 238.

[22] As the Law of Geneva was being updated in the 1960s, specialists involved understood that because modern methods and means of warfare had become so destructive, with civilians bearing most of the consequences, the Law of the Hague also needed to be updated. For example, Additional Protocol I to the 1949 Geneva Conventions contains provisions on the regulation of the means and methods of warfare. Rosas, 220-221.

be more prominent. To a certain extent, there are customary principles that can be agreed upon by different parties of what constitutes civilized behaviour. Other principles depend upon a balance between a variety of variables that go beyond the traditional IHL dichotomy between humanity and military necessity. Jacques Meurant points out that:

> ...[T]he so-called compromise between military necessity and humanitarian considerations cannot be considered as a fully satisfactory explanation. The outlawing of certain methods of combat is rather achieved as a result of decisions taking into account the political, economic and military interests of the belligerent.[24]

There are certain principles which underscore the concept that the means and methods of warfare are not unlimited. Military necessity seeks to restrict the use of force to what is strictly necessary for achieving the military objective. Under the Lieber Code of 1863, "Military necessity, as understood by modern civilised nations, consists in the necessity of those measures which are indispensable for securing the ends of war, and which are lawful according to the modern law and usages of war."[25] Another definition of military necessity describes it as "such destruction, and only such destruction, as is necessary, relevant, and proportionate to the prompt realization of legitimate military objectives."[26] Closely related to the concept of military necessity is the issue of proportionality. Proportionality strikes a balance between the military utility of a weapon or the intensity of attack against the suffering it causes. For example, it would be a disproportionate response to destroy a village of civilians in

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[23] Veuthey, op. cit., in Cahill, (ed.), (1993).
[24] Meurant, 245.
[25] The Lieber Code was named after the jurist Francis Lieber who was commissioned by President Lincoln to draw up a law code of war during the American Civil War. Although the code was an attempt to codify the law of war on a domestic basis, it formed the basis for later attempts on the international scale. See Section I, Article 14 of the "Instructions for the Government of the Armies of the United States in the Field", Prepared by Francis Lieber, Promulgated as General Orders No. 100 by President Lincoln, 24 April 1863. This text is reproduced in Dietrich Schindler and Jiri Toman, (eds.), The Laws of Armed Conflict A Collection of Conventions, Resolutions and Other Documents, 3rd ed., Henry Dunant Institute-Geneva, (Dordrecht: Martinus Nijhoff Publishers, 1988), 3-23.

order to remove one sniper.[27] Unfortunately, this can be a rather grey area and open to subjective interpretation. If a weapon or action is considered to be militarily expedient, then its deployment may be justifiable. The principle of unnecessary suffering or superfluous injury also treads a fine line between military necessity and the interests of greater humanity. Once again, the problem of what constitutes 'unnecessary suffering' can be a subjective concept. The St. Petersburg Declaration of 1868 proclaims:

> That the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy;...That this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men,...[28]

All weapons have the capacity to kill and injure in the quest for military gain; that is their purpose, but they should not go beyond what is necessary to achieve these goals. The concept of superfluous injury concedes that a weapon may take the life of a combatant, but the weapon in question should not create injuries which exceed his actual incapacitation. Hays Parks uses the example of a barbed spear to illustrate this point:

> A spear without barbs will incapacitate the enemy soldier: the barbs do not enhance the probability of incapacitation, but serve to aggravate the wound, thereby causing superfluous injury. The concept is sound: it recognizes that all wars end, and weapons that cause superfluous injury needlessly extend the suffering of combatants beyond the war.[29]

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[26] Myres McDougal and Florentino Feliciano, Law and Minimum World Public Order, (New Haven: 1961), 72 as quoted in W. Hays Parks, "The Laws of War", in Richard E. Burns, (ed.), Encyclopedia of Arms Control and Disarmament, (New York: Charles Scribner's Sons, 1993) 1055.

[27] Ibid., 1056. According to W. Hays Parks there are three general means to assess proportionality: an act of self-defence during peacetime should be proportionate to the threat; the reprisal action is proportionate to the original wrong; the military value of the weapon should be balanced against the suffering it may cause.

[28] 'Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight' (The St. Petersburg Declaration of 1868). Full text available in Schindler and Toman, 101-103, and Adam Roberts and Richard Guelff, (eds.), Documents on the Laws of War, (Oxford: Oxford University Press, 1982), 29-31. The Declaration is also excerpted and discussed in Frits Kalshoven, "Arms, Armaments and International Law", Recueil des Cours: Collected Courses of the Hague Academy of International Law, 1985, II, (Dordrecht: Martinus Nijhoff Publishers, 1986), 206.

[29] Parks, op. cit., in Burns, (ed.), 1056.

Unfortunately, these prohibitions on the means of warfare do not prohibit the weapon itself, but only its effects which result in numerous violations.[30] If the weapon itself is not prohibited, then it is very difficult to control its effects.

Next, the principle of discrimination seeks to protect non-combatants or civilians from the excesses of war. A military attack should be designed to discriminate between civilians or civilian targets and combatants and military targets. In practical application, however, the targeting of a specific military objective is not always carried out rigorously, mixing together both civilian and military targets. Discrimination becomes even more problematic when weapons are used which cannot be aimed specifically to distinguish between a combatant and non-combatant. Few states are willing to concede that a weapon can be classified as inherently indiscriminate; instead, they advocate using them with all requisite caution.[31] Frits Kalshoven acknowledges that "the conclusion seems therefore hard to avoid that violation of the requirement of discrimination will in general result from the method of use of a given weapon rather than from its properties."[32]

It is also forbidden to use perfidious acts that trick an adversary into believing that he will be protected under the law of war, when in fact it is a ruse. For example, faking a surrender before carrying out an attack is prohibited.[33] There has been a reluctance to

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[30] Knut Ipsen makes this point in a discussion about prohibited means and methods of warfare. See Knut Ipsen, "International Law Preventing Armed Conflicts and International Law of Armed Conflict-A Combined Functional Approach", in Christophe Swinarski, (ed.), Studies and Essays on International Humanitarian Law and Red Cross Principles in Honour of Jean Pictet, (Geneva-The Hague: ICRC, 1984), 357.

[31] Kalshoven notes that in the conferences re-examining IHL, experts were reluctant to name a specific weapon as indiscriminate, but preferred to use the standard of weapons being indiscriminate in certain circumstances. See Kalshoven, op. cit., (1986), 246-247.

[32] Ibid., 236.

[33] Parks, op. cit., in Burns, 1064.

define perfidious weapons as such; instead, weapons can be considered perfidious according to the circumstances of use. Booby-traps and poison have been considered as perfidious weapons by some of the experts debating this issue.[34] Finally, the principle of intentional environmental damage is also considered an unlawful method of warfare. Article 35, Paragraph 3 of the Additional Protocol I to the Geneva Conventions states that "It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment."[35] The 1977 Convention on the Prohibition of Military or any Other Hostile Use of Environmental Modification Techniques (ENMOD) also supports this principle. Total prohibitions on the use of specific weapons as a means of warfare are very rare under IHL. The Geneva Gas Protocol of 1925 and Protocol I on Non-Detectable Fragments of the CCW of 1980 attest to the uniqueness of such an action and the hesitations states may have in prohibiting a weapon.[36]

Section 1.5-The Interplay Between IHL and Arms Control and Disarmament

The study of IHL, both in its making and its application is far more complicated than it used to be; it also overlaps with and bears more relevance to other disciplines of contemporary international relations. Specifically, the overlap between IHL and arms control and disarmament is relevant to this study. International law intended to prevent armed conflict in connection with the arms race pertains to arms control and disarmament law which is based upon treaty or conventional law. International law applicable during armed conflict pertains to the law of war which is based upon

[34] Kalshoven, op. cit., (1986), 237.
[35] Ipsen, op. cit., in Swinarski, (ed.), 357.

customary rules and principles.[37] These two tenets in international law intersect when the methods and means of warfare are being restricted or prohibited. Arms control measures are both a preventative and reactive response to particular weapons and are normally applicable during both times of peace and conflict. IHL usually prevails during times of armed conflict. Whenever there are any restrictions or prohibitions on the use of weapons, especially during times of conflict, arms control elements are at work—hence the crossover between IHL and arms control. The most fitting description of this crossover is defined by Ove Bring as 'humanitarian arms control'.[38] Traditionally, arms control policy has been negotiated taking into account concerns of national security and international stability. Humanitarian considerations have played a lesser role, and policy matters remained the sovereign right of the state. Currently, other actors are beginning to influence the arms control process. The campaign to ban anti-personnel land mines has forced governments and military establishments to re-examine the effects and consequences of weapon use. Thanks to this campaign, a definite 'humanitarian creep' is influencing the consideration of weapons policy. The CCW review process has opened the door for restricting the use of other weapons that may be particularly odious or distinctly anti-personnel in nature.

To a certain extent, there is an interdependence between IHL and arms control. For example, when it is not possible to remove a particular weapon from an arsenal or prohibit its use, then an alternative response or solution may be found in regulating the means and methods of warfare under IHL. Paradoxically, any efforts designed to

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[36] Ibid.
[37] Ibid., 352. Despite its customary basis, the Law of War has also been codified into Conventions.
[38] According to Ove Bring, Legal Advisor, Ministry for Foreign Affairs of Sweden, 'humanitarian arms control' is an appropriate description when the humanitarian element dominates. See Bring, op. cit., (1987), 275.

curtail the use of particularly reprehensible weapons will be undermined as long as these weapons are retained by various states.[39] As Ove Bring argues:

> The *de facto* relationship between humanitarian law and arms limitation was not coincidental. Any *total prohibition* on use could lead to weapons being eliminated from the arsenals. Mere *restrictions* on use of certain weapons, however, would probably not lead to such results.[40]

Bring is implying that if there are only restrictions as opposed to prohibitions on the use of a particular weapon, then it is unlikely that regulations will be any more forceful in the arms control or disarmament field. If there are no precedents or norms established under IHL denouncing a particular weapon, then it is very difficult for the humanitarian argument to prevail at the arms control or disarmament stage. Still, the limitations of IHL should not obscure its considerable effectiveness, and its value:

> International humanitarian law can justly be seen as part of the arms control process. In imposing constraints on warfare it shares the same fundamental motives underlying all efforts towards disarmament and arms control. When its basic aims and practices are examined systematically from the viewpoint of arms control, not only does its intimate proximity to other arms control endeavours become evident, but also it can quite pertinently claim to represent one of the most successful cases of arms control.[41]

Obviously, the closest link that IHL has to arms control and disarmament is to make war less destructive and destabilizing. Daniel Frei pinpoints four dimensions of restraints on the use of weapons applicable to the relationship between IHL and arms control and disarmament: geographic, material, operational, and targeting. For example, both IHL and arms control measures can restrict the area where weapons are deployed or used; restrict the use of a particular type of weapon; restrict the way the weapon is used; and restrict the selection of targets.[42] Frei argues that chemical weapons, one of the few weapons whose use is prohibited under IHL, have the

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[39] Jozef Goldblat makes this point in a discussion about the law of armed conflict and disarmament. See Goldblat, 200.
[40] Ove Bring, op. cit., (1987), 276.
[41] Frei, 503.
[42] Ibid., 493-497.

capacity to create strategic instability due to the proliferation of these weapons in areas of high tension. Traditionally, smaller, conventional weapons were not perceived as causing strategic instability. In reality, however, it is the smaller conventional weapons which are being used in the numerous, limited conflicts being waged throughout the world at any given time, causing untold damages. As Aaron Karp observes, "...it is the trade in small and light weapons that pose the immediate threat to human well-being and international stability."[43] No one would argue that land mines are a strategic weapon system *per se*, but that does not mean that the excessive, indiscriminate use of land mines is not destabilizing. If states cannot return to normalcy, then further instability may ensue.

IHL and arms control and disarmament also have similar goals in the pursuit of peace through conflict management and a relaxation of tensions. Arms control measures can foster trust between states through Confidence Building Measures (CBMs) such as a relaxation of tensions achieved by reducing the number of weapons aimed at an adversary. IHL opens a dialogue between states so that negotiations for more peaceful relations can take place. Jozef Goldblat argues that:

> The objective of CBMs is to translate the general principles of international law into positive action so as to provide credibility to states' affirmations of their peaceful intentions....In general, CBMs do not directly affect the strength of armed forces or armed inventories, but they make less likely the use of force for settling disputes. They may facilitate progress towards disarmament: they thus constitute a category of arms control measures.[44]

IHL agreements also facilitate confidence between states by creating a climate of goodwill and reciprocity which lays the foundation for future restraints. IHL restraints on the use of a weapon can be viewed as CBMs in themselves as they are less

[43] Aaron Karp, "The Arms Trade Revolution: The Major Impact of Small Arms", The Washington Quarterly, Autumn 1994, 65.

ambitious than full arms control or disarmament agreements. Until the political climate improves or is more suitable, these measures may also present the only practical option available. As Ove Bring argues:

> ...[I]n trying to get 'the ball rolling' one should not exclude that the approach of international humanitarian law could be useful also in the context of international security....The two concepts [IHL and arms control] overlap and cannot be mutually exclusive. Moreover, one legal approach does not exclude the other.[45]

IHL and arms control are complementary approaches to restricting or prohibiting a particularly repugnant weapon. Neither stands alone. Where one fails (IHL), the other (arms control or disarmament) should prevail. When arms control or disarmament measures are absent, then IHL should regulate in their absence. IHL can be used as a 'measuring stick' to indicate the wrongs in the international system. If one could say that disarmament is the endpoint of IHL, then perhaps IHL is the starting point of disarmament. When restrictions on the use of weapons are constantly violated, then stronger measures are required. The only way to ensure that these weapons are not used illegally is to place restrictions or prohibitions not only on their use, but also upon their manufacture, transfer, or stockpiling.

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[44] Goldblat, 2.
[45] Bring, (1987), 284.

CHAPTER II

The Threat of Chemical Weapons and Land Mines

Chemical weapons and land mines pose a threat both to international security and to human beings. To understand the depth and nature of this threat, it is necessary to examine the following criteria: the manner in which these weapons function; the immediate and long-term effects of these weapons; concerns about proliferation and the reasons for acquisition; the frequency and circumstances of use; and the military and perceived military utility of these weapons. Such an examination is important, as there are many different perceptions and misconceptions concerning these two weapon systems. Outwardly, land mines appear to be small, uncomplicated, conventional weapons used frequently for legitimate military purposes. To date, however, they have been the cause of prolonged human suffering in numerous Third World countries. Chemical weapons, on the other hand, have been perceived as so horrific that it is hoped, virtually universally, that they are never used. Chemical weapons are also considered a weapon of mass destruction (WMD), giving them strategic significance, and a much higher position on the arms control and non-proliferation agenda than land mines. Nonetheless, both of these weapon systems can be triggered indiscriminately and can cause terrible injuries or death. The purpose of this section is to separate fact from fiction, to evaluate how similar or different are the threats from these weapons, as well as to ascertain which weapon really is more of a threat, and to whom.

Section 2.1-Chemical Weapons-A Description

"Poisonous" weapons have been used throughout the ages as a method of warfare, or as Howard Levie puts it: "if fire and smoke are chemical weapons, as has sometimes been claimed, then chemical weapons have been used for many centuries."[1] Chemical weapons, commonly referred to as gas or poison weapons, are composed of chemical agents which have varying effects on humans. The U.S. Congress's Office of Technology Assessment defines these agents as "poisons that incapacitate, injure or kill through their toxic effects on the skin, eyes, lungs, blood, nerves or other organs."[2] Contemporary chemical weapons are more than just poisons. Chemical weapons capabilities which are truly viable militarily require:

> A complete CW munition programme involving fabrication of munitions, production of CW agents and filling of the agents into the munitions after which they would be delivered into the military logistics system for storage.[3]

There are five main categories of agents: disabling; choking; blistering; and blood and nerve agents. Disabling agents or harassing agents are probably the most innocuous form of a chemical weapon; tear gases like CS and CN are the most common of these agents. Choking agents such as phosgene and diphosgene attack the victim's respiratory tract by filling the lungs with fluid and killing the victim, or leaving him with chronic breathing problems. Chlorine gas, a choking agent, was used extensively during World War I. Blister agents produce water-based

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[1]Howard Levie, "A Lookback at the Efforts to Eliminate Chemical Warfare", The Military Law and Law of War Review, Vol. XXIX, No. 1-2, 1990, 289.
[2]U.S. Congress, Office of Technology Assessment, Proliferation of Weapons of Mass Destruction: Assessing the Risks, (Washington: USGPO, 1993), 3, (Hereafter OTA, Assessing the Risks).

blisters on the skin and can also damage the eyes, respiratory tract and blood cells; the most common of these is mustard gas. Blood agents, as the name suggests, are absorbed into the body by breathing, and once in the bloodstream, deprive vital tissues of oxygen; hydrogen cyanide is the most common of these agents. Nerve agents are divided into two different categories: G agents and V agents. G agents cause death by inhalation; V agents are normally liquid in origin and are absorbed through the skin. The most common and lethal nerve agents are Tabun, GA, Sarin, GB, Soman, GD, and VX. For example, a lethal dose for humans of one of these nerve agents is less than .01 mg per kg of actual body weight. As the name suggests, nerve agents attack the nervous system, causing a loss of bodily functions and respiratory distress resulting in eventual death from the paralysis of the respiratory muscles.[4]

A chemical weapons attack against an unprotected population can produce massive casualties.[5] Under perfect dispersal conditions, 7.2 tons of VX delivered by aircraft would kill 125, 000 civilians in densely populated area.[6] Five tons of nerve gas dispersed over open countryside using the most common atmospheric dispersion models would cause casualties of about 50% over 4 square miles

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[3] Gordon Burck, "Chemical Weapons Technology and the Conversion of Civilian Production", Arms Control, Vol. 11, No. 2, September 1990, 122.

[4]Frank Barnaby, The Role and Control of Weapons in the 1990s, (London: Routledge, 1992), 67-69; Mervin Hamblin, "Potential Risks Associated with New Technologies in the Chemical Weapons Field", in Joachim Krause, (ed.), Security Implications of a Global Chemical Weapons Ban, (Boulder: Westview Press, 1991), 65. See also OTA, Assessing the Risks, Table 2-1, 47, for a concise description of these various categories.

[5]Julian Perry Robinson, "Chemical Weapons Proliferation", in Efraim Karsh, Martin Navias and Philip Sabin, (eds.), Non-Conventional Weapons Proliferation in the Middle East, (Oxford: Clarendon Press, 1993), 79.

[6]Anthony Cordesman, "One Half Cheer for the CWC: Putting the Chemical Weapons Convention into the Military Perspective", in Brad Roberts, (ed.), Ratifying the Chemical Weapons Convention, (Washington: Center for Strategic and International Studies, 1994), 44.

against the unprotected population. Under different circumstances the results could be dramatically different. Although the examples which follow were not military chemical attacks *per se*, the resultant chemical contamination might indicate the range of destructiveness of a chemical weapons attack. The chemical accident in Bhopal, India, killed over 2000 people and injured thousands more, yet at the same time a comparable accident in Hamburg, Germany, in 1928 only killed eleven people due to the prevailing weather conditions.[7]

Section 2.1.1-Use of Chemical Weapons

It was the advent of the industrial age which made possible the mass production and use of chemical weapons in the modern context.[8] About 40 different chemical agents were used in World War I, but Chlorine, Mustard, and Phosgene gases predominated. It was estimated that about 100,000 people were killed and over one million were injured during that conflict by the use of chemical weapons alone.[9] A note of caution is in order when assessing these casualties. The use of chemical weapons in World War I resulted in between 1.6 to 5 times as many casualties as from a corresponding amount of conventional explosives; these rates dropped when adequate protection was used or made available. Casualties were highest in 1915 when gas was first introduced against unprotected troops, and

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[7]Robinson, op. cit., in Karsh et al., 80.

[8]Victor Utgoff, The Challenge of Chemical Weapons: An American Perspective, (Basingstoke and London: MacMillan Press Ltd, 1990), 3.

[9]Barnaby, 71, and Thomas Graham, "Limitations on Chemical and Biological Weapons", in Paul B. Stephan and Boris M. Klimenko, (eds.), International Law and International Security Military and Political Dimensions, (New York: M.E. Sharpe, Inc., 1991), 116.

again in 1917 when mustard gas was introduced, requiring the hurried provision of protective clothing as well as gas masks.[10]

Other uses of chemical weapons have been more sporadic and less concentrated since that era. There appear to be more cases of alleged use than verifiable or admitted uses. According to Dr. Ralf Trapp, of the Verification Bureau of the Organization for the Prohibition of Chemical Weapons (OPCW), verifying a chemical attack is a nebulous process; it is often difficult to pin-point exact locations of a chemical weapons deployment, as the properties of chemical agents may disappear after a few days, effectively erasing the evidence as well. Although interviews with alleged victims can be helpful, unless there is actual medical evidence from the victims detailing recognized tell-tale symptoms, or if chemical delivery shells have been recovered, it is very difficult to verify that a chemical agent has been used.[11] Finally, states may have a political agenda in accusing one another of using chemical weapons. There is a fair amount of consensus pertaining to some of the deployments, but a good deal of controversy regarding others.

The following cases of chemical weapons use have been either substantiated or acknowledged since World War I: Spanish forces in Morocco in 1925; Italian forces in Libya in 1930; Soviet forces against Muslim insurgents in Sinkiang in 1934; Italian forces in Ethiopia in the 1930's; Japanese forces in Manchuria

[10]Thomas McNaugher, "Ballistic Missiles and International Chemical Weapons", International Security, Fall 1990, 19. For a further study of the different stages of gas warfare in World War I see Utgoff, Chapter I.

during World War II; Egyptian forces in North Yemen in the 1960s; and British forces in the Russian Civil War in 1919.[12] There was also widespread use of chemical agents by the United States in Vietnam between 1961-75 in the form of herbicidal warfare. While these defoliants were meant to destroy the environment, by-products of their use, such as dioxin, are reported to have had carcinogenic and genetic effects on humans; therefore, these agents may have contributed to long-term health hazards for anyone exposed to them.[13] The most prominent example of the contemporary use of chemical weapons after a long period of abstinence was their deployment during the Iran-Iraq War. Although the exact number of casualties is not known, these weapons are thought to have caused about 50,000 casualties including 5,000 deaths.[14] Iraq was also the perpetrator of recent chemical weapon use against Kurdish civilians at Halabja in March of 1988. It is estimated that about 5,000 Kurds died and that 7,000 were injured during that conflict.[15]

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[11]Interview conducted with Dr. Ralf Trapp of the Verification Bureau of the Provisional Technical Secretariat for the Organization for the Prohibition of Chemical Weapons (OPCW), The Hague, November 1994.

[12] Data taken from the Sussex-Harvard Information Bank on CBW Armament and Arms Limitation by Julian Perry Robinson, op. cit., in Karsh, et al., 73; McNaugher, 7; Barnaby, 72.

[13]Barnaby, 74. Ironically, Agent Orange, the most common of these defoliants, is alleged to have caused cancer and other medical problems years later in U.S. servicemen exposed to their own agents. This has always been a controversial matter for the U.S. military and to date, there have also been no comprehensive studies on the effects of these agents on civilians in the country, to the author's knowledge.

[14]OTA, Assessing the Risks, 10. Its estimates of 50,000 casualties are from the testimony of R. James Woolsey, Director of the Central Intelligence Agency, before the Senate Committee on Government Affairs, February 25, 1993. The United States' estimates of the numbers killed by CW is put at 5000 according to Utgoff, 82, in reference to Don Oberdofer, "U.S.-Soviets May Meet Soon on Curbing Chemical Arms", *The Washington Post,* 4 January 1986, 1. Iranian sources also estimate 50,000 casualties and 5,000 deaths. See Michael Eisenstadt, The Sword of the Arabs: Iraq's Strategic Weapons Program, Policy Paper, No. 21, Washington Institute for Near East Policy, 1990, Chapter I, quoting as a reference Iran's Foreign Minister, Ali Akbar Velyati's comments to the international conference on chemical weapons, January 7, 1989 as reprinted in FBIS-West Europe, January 9, 1989, 7.

[15]Kenneth Timmerman, The Death Lobby How the West Armed Iraq, (London: Bantam Books, 1992), 377, and Barnaby, 75. Press reports estimate a slightly higher figure of nearly 10,000 casualties as cited in Karsh, et al., 40. A lesser figure of 3000 civilians killed is given by Victor

There have also been numerous cases of the alleged use of chemical weapons which have yet to be substantiated or verified.[16] The difficulties in substantiating the use of chemical weapons lie not only with actual verification, but also with the political motivations of states or actors who make the accusations. As states had pledged not to use chemical weapons except for retaliation, the political costs to any state caught using them would be high. For example, the Soviet Union and its satellites were accused of using chemical weapons in South East Asia and Afghanistan during the 1970s. This became a major political issue as:

> Distrust was to arise as détente was crumbling. On the other hand, there were an increasing number of claims that Soviet proxies in the developing world, including Vietnam, Ethiopia and Angola, had obtained toxic substances from the Soviet Union and were actually using them. Even the Soviet Union itself was reported to have employed CW agents in Afghanistan. Whatever the veracity of these reports, they served those who had a vested institutional interest in renewed American CWW production well.[17]

At the instigation of the United States, a UN Group of Experts was convened to investigate this situation. Its members were denied entry into the states involved, which resulted in inconclusive reports. These reports did stipulate, however, that there was some evidence of the use of chemical substances. Unfortunately, no clear-cut answers were forthcoming, as it was also acknowledged that these chemical traces could have resulted from natural causes. According to Victor

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Utgoff, 85, from a reference by Norman Kirkham, "Iraqi Gas Leaves a Modern Pompeii", *The Washington Times*, 23, March 1988, 1.

[16]Vietnam in Laos and Kampuchea (1974-78), in China (1979); Thailand along its border with Kampuchea, (1982, 1985, 1988); South Africa in Angola (1978, 1982, 1988); Angola against UNITA positions (1985,1986,1988); C.I.A. activities in Cuba (1978-1982); the Soviet Union in Afghanistan (1979-1986); Ethiopia in Eritrea (1980-1986), and in Somalia (1981); El Salvador (1981-1985); Nicaragua (1985-1986); The U.K and Argentina in the Falklands (1982); Guatemala against rebels, (1984), the U.S. in Grenada (1983); Indonesia in East Timor (1985); Libya and Chad in Chad, (1986, 1987). This list is reproduced from Timothy McCormack, "Chemical Weapons in the Gulf War", California Western Journal of Law, Vol. 21, No. 1, 1990-1991, 2, through his compilations from various SIPRI Yearbooks.

Utgoff, "both positions have some merit, and both pose considerable hazards as well."[18] The truth may have been lost not only through the practical problems of verification but also through the political climate of the day. These examples also demonstrate how difficult it is to prove that chemical weapons attacks have taken place when there is a delay between the reporting of the incident and the investigation, not to mention a lack of co-operation from the parties involved.

Section 2.1.2-Possession

Very few states have actually admitted to possessing chemical weapons. Suspected chemical weapons possessors have kept a veil of secrecy over these programmes. As a result, according to Julian Perry Robinson:

> The present state of that 'spread' of chemical warfare weapons is hard to specify. The picture is in shades of grey, not the relatively sharp contrasts that distinguish the 'haves' from the 'have-nots' in the realm of nuclear weapons.[19]

Officially, only the United States, the former Soviet Union, and Iraq have admitted possessing chemical weapons. The Director of U.S. Naval Intelligence, Rear Admiral Thomas Brooks, testified to the U.S. Congress in 1991 that there were about 14 states outside NATO and the Warsaw Pact that probably had offensive chemical weapons capabilities, and that ten more were seeking to develop the capability.[20] These figures are disputable as other sources have claimed that only

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[17]Jean Pascal Zanders, "Towards Understanding Chemical Warfare Weapons Proliferation", Contemporary Security Policy, Vol. 16, No. 1, April 1995, 86-87.

[18]Utgoff, 80.

[19]Robinson, op. cit., in Karsh, et al., 88.

[20]Julian Perry Robinson, "The Supply-Side Control of the Spread of Chemical Weapons", in Jean-François Rioux, (ed.), Limiting the Proliferation of Weapons, The Role of Supply-Side Strategies, (Ottawa: Carleton University Press, 1992), 60-61, from the Statement of Rear-Admiral Thomas A. Brooks, USN, Director of Naval Intelligence before the Seapower, Strategic, and Critical Materials Subcommittee of the House Armed Services Committee, on Intelligence Issues, 7 March 1991, 56-

about twenty states besides the former Soviet Union and the United States have chemical weapons capabilities but that only five or six actually possess a militarily viable stockpile. In addition, some states have adamantly denied possession of these weapons.[21] As these programmes are clouded in secrecy, it is often difficult to ascertain to what degree and level of sophistication development has reached. A note of caution is advised when considering quantity versus quality of arsenals. There is a good deal of confusion surrounding the definition of just what constitutes an offensive chemical weapons capability.[22] The difficulty in assessing the military significance of a state's chemical weapons programme is exemplified by the case of Iraq. It was not until the subsequent UNSCOM investigations following the Gulf War that the true size and sophistication of the Iraqi arsenal was uncovered. After the United States and Russia, Iraq was thought to have the third largest arsenal in the world, and the most advanced in the Middle East.[23]

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69. See also Elisa Harris, "Towards a Comprehensive Strategy for Halting Chemical and Biological Weapons Proliferation", Arms Control, Vol. 12, No. 2, September 1991, 129. The following countries are suspected of possessing an offensive chemical weapons capacity: In the Middle East: Egypt, Israel, Iran, Iraq, Libya, Syria; in Asia: Burma, China, India, North Korea, Pakistan, South Korea, Taiwan, Vietnam. Harris also includes Ethiopia in this list, as Admiral Brooks named this country in earlier testimony. Countries which "may possess" chemical weapons include the following: Indonesia, Saudi Arabia, South Africa, and Thailand.

[21]Robinson, op. cit., in. Rioux, 61; Elisa Harris, "Chemical Weapons Proliferation: Current Capabilities and Prospects for Control", in The Aspen Strategy Group, New Threats, Responding to the Proliferation of Nuclear, Chemical, and Delivery Capabilities in the Third World, (Lanham: University Press of America, 1990), 72; and Barnaby, 83. The following countries have all declared non-possession: Afghanistan, Argentina, Burma, Chad, Chile, Egypt, El Salvador, Ethiopia, France, Guatemala, India, Indonesia, Jordan, Mozambique, Nicaragua, North Korea, Pakistan, Peru, the Philippines, South Africa, South Korea, Taiwan, and Vietnam.

[22] According to Elisa Harris, there are substantial differences between having the capability to produce chemical weapons, and the possession of a comprehensive and viable military stockpile. One definition of what constitutes a chemical weapons capability is explained by Kenneth Adelman. He states that a chemical weapons capacity is " 'sufficient so that it could give a military utility to the possessing country, and sufficient to cause a great deal of damage to the other side. We are not talking about experimental possession, research possession.' " See Harris, op. cit., in The Aspen Strategy Group, 68, note 4.

[23]Eisenstadt, Chapter 1; Geoffrey Kemp, The Control of the Middle East Arms Race, (Washington: Carnegie Endowment for International Peace, 1991), 75.

Section 2.1.3-Proliferation

In an interdependent world, access to technology and information transcends borders. The internationalization of the petrochemical, pharmaceutical and pesticide industries has stimulated a growth in trade and hence access to these technologies and capabilities.[24] The diffusion of technology and information has had a significant impact not only on industrial development, but on the burgeoning chemical weapons programmes. The extent to which Western industrialized states are responsible for chemical weapons proliferation is controversial, but it would be difficult to dispute that economic interests were placed ahead of security interests in the development of chemical weapons programmes.[25] The former Director of the CIA, William Webster, points out that:

> ...[T]hese companies [mostly Western] have provided crucial assistance, including chemical precursors, production equipment, actual production facilities, munitions parts, and training for personnel. Without this assistance, many of these programs simply would not exist.[26]

It remains a fact that technology in an interdependent world is becoming more difficult to control, as it serves both legitimate and non-legitimate functions. The spate of embarrassing publicity surrounding Western participation in aiding these illicit programmes eventually led to tighter controls being enacted. It was not until the late 1980s, however, that industrialized states started to co-operate and restrict their export control policies.

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[24]Brad Roberts, Chemical Disarmament and International Security, International Institute for Strategic Studies, London Adelphi Papers 267, Spring 1992, 16.

[25]For an interesting investigation of Western companies that supplied dual-use technology to Iran, Syria and Libya see Simon Wiesenthal Center Special Report from Middle East Defense News, Weapons of Mass Destruction: The Cases of Iran, Syria and Libya, (Los Angeles: August 1992).

[26]Elisa Harris, "Chemical and Biological Weapons: Preventing the Spread of the "Poor Man's Atomic Bomb?", in Rioux, (ed.) op. cit., 75-76. Harris takes Webster's comments from U.S. Senate, Committee on Governmental Affairs and its Permanent Subcommittee on Investigations,

Dual-use technology found in the chemical industry sometimes makes it difficult to differentiate between legitimate and non-legitimate purposes. According to the U.S. Office of Technology Assessment (OTA), "Intent cannot be inferred directly from capability."[27] This relationship between intent and capabilities is one of the more confusing aspects of the proliferation picture. Nevertheless, it is a common misperception that a significant chemical weapons manufacturing capability can easily develop from the legitimate chemical industry. According to Gordon Burck, there are three common myths about the manufacture of chemical weapons: that they can be produced easily in any chemical plant; that a commercial chemical plant can be converted to chemical weapons use quite easily and rapidly; and that the reverse process is also viable.[28] While the technology to produce mustard and nerve gas is well documented, the equipment and production steps required in the process are not easily convertible from the techniques used in the civilian chemical industry. New plants would have to be built or extensively altered.[29]

Other trends have also influenced the proliferation of these weapons in recent years. First, the alliance of chemical weapons with ballistic missiles, although not yet utilized, could truly transform these weapons into weapons of mass destruction; especially if they were targeted at cities or other highly populous regions. Second, political barriers against the use of chemical weapons have also

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Global Spread of Chemical and Biological Weapons, 101st Congress, 1st Session, (Washington: USGPO, 1990), 11-12.

[27]OTA, Assessing the Risks, 37.

[28]Burck, 137. See the whole article for a discussion of the technical aspects of CW technology production and the difficulties of differentiating them from commercial production.

[29]Burck, 122.

eased. In its war with Iran and its attack on the Kurds, Iraq breached a long-standing taboo against the use of chemical weapons, and was not held accountable for its actions. This may encourage further violations. As Timothy McCormack warns: "Because of their silence, governments from all countries have encouraged future violations of the Geneva Protocol."[30] Iraq also used chemical weapons to some tactical advantage in its war with Iran, and thus a weak state may infer advantages to using such a weapon if they feel there would be no international action or sanction against them. The Indian Defence Forces have commented that " 'If the political costs are seen as minimal, and as affordable, the military incentives for chemical weapons would multiply globally....' "[31] Third, if a weapon can have such far reaching consequences, perhaps it can be used as a bargaining chip to counteract stronger regional powers.[32]

Section 2.1.4-Military Utility of Chemical Weapons and Other Reasons for Acquisition

An examination of the military and perceived military utility of chemical weapons is crucial to understanding the reasons for their acquisition and retention. It is sometimes difficult to generalize about the military utility of these weapons, as different states may have divergent political views and security needs. By examining the varied perspectives on the utility of chemical weapons, it might be

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[30]McCormack, 29.

[31] Ibid., 29-30.

[32]See Roberts, op. cit., (1992), 16-17. Roberts is pointing out that in the context of regional power struggles in the Middle East, states seek to acquire chemical weapons as a bargaining tool to offset any military or political inferiority they may have. Arab states may also link their disarmament of chemical weapons to Israeli disarmament of nuclear weapons.

possible to see if any definitive conclusions can be drawn regarding their value as a weapon system.

The military utility of chemical weapons can be divided into strategic and tactical use. Strategic use of these weapons would involve destroying the opponent's military infrastructure as well as its economic infrastructure and population base. To date, this type of action with chemical weapons has not occurred, and is unlikely to occur in the immediate future. While there could be a great deal of civilian casualties if chemical weapons were to be used against an unprotected population, civilian defence measures and the unpredictability of chemical weapons dispersion could reduce casualties significantly. In addition, chemical attacks could contaminate infrastructure but not destroy it; hence, economic infrastructure would probably be left intact after decontamination. It is also likely that protected military installations would be able to withstand a chemical attack.[33]

Tactical use of chemical weapons concentrates on the more direct engagement of front-line military forces and supply lines.[34] Persistent chemical agents could create contaminated zones, restricting the military operations of both sides. Similarly, non-persistent agents might be used to disrupt the enemy and allow advances through their territory.[35] Chemical weapons are perhaps best utilized as a force multiplier. They can be used in conjunction with other weapons to add confusion to the battlefield scenario, as troops are slowed down by having to don

[33] OTA, Assessing the Risks, 55, 62.
[34] Ibid., 55.
[35] Ibid., 9.

protective gear and to decontaminate themselves.[36] Chemical weapons also have a significant psychological impact on victims in terms of morale. Their use can scare participants and instil panic at the tactical level, and deployed at the strategic level against cities and civilians, they can cause mass panic.[37] Finally, chemical weapons are considered useful for deterrent purposes, as no country wants to risk retaliation with these weapons.

A brief review of the use of chemical weapons in a major conflict is necessary, as it demonstrates how useful these weapons have been in actual conflict. There are few examples of this type of situation in terms of the modern widespread usage of chemical agents in warfare. Interestingly enough they are on opposite ends of the time spectrum, World War I and the Iran-Iraq War. Chemical weapons were first used on a wide-scale basis during World War I to overcome a stalemate in the trenches. They were introduced as a new innovation to the battlefield. The Germans initiated the use of chemical warfare in the assumption that the allies did not have the capabilities to retaliate in kind.[38] Had this assumption been completely valid, the German forces could have gained a decisive military advantage. Although chemical weapons succeeded in adding to the horrors of war and complicating action on the battlefield, their use did not achieve decisive results.[39]

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[36]Robinson, op. cit., in Karsh, et al., 78.
[37]McNaugher, 15, 22 and OTA, Assessing the Risks, 9.
[38]Utgoff, 5 and Sabin, op. cit., in Karsh, et al., 14.
[39] Utgoff, 10.

The Iran-Iraq War presents an interesting case-study of the perceived military utility of chemical weapons in a modern conflict. The Iraqi's used chemical weapons on the battlefields in 1984 in response to Iranian human wave assaults. The war had been going very badly for Iraq and as Thomas McNaugher observes:

> Morale was high; at this point in the war religious fervor gave Iranian youths the courage to walk through minefields, and no doubt made them fearless of gas clouds as well. Zealotry could not keep them alive, however, so Iraqi chemical weapons no doubt took its toll in Iranian casualties.[40]

There is a popular perception that the Iraqi use of chemical weapons against the ill-equipped Iranians was a decisive victory and a major validation of the use of chemical weapons. While it is likely that the use of chemical weapons did bring Iran to the bargaining table, it is disputable whether the use of such weapons brought the war to a close, or just expedited its inevitable conclusion.[41] With the mass panic chemical weapons caused among Iranian soldiers, and the spectre of a chemical threat against Iranian cities looming, it would appear that Iraq did use chemical weapons to some advantage. In reality, it was Iran's own reaction to its unpreparedness which may have aggrandized the effects of Iraqi chemical use. Still, Iraq managed to use chemical warfare as a force multiplier, to compensate for its inferiority in other military areas.

The non-use of chemical weapons during World War II (except for Japanese use in China) is very significant, as it attests to the lack of battle merit attached to chemical weapons warfare. Victor Utgoff is quick to point out that the chemical

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[40]McNaugher, 17.

[41] Thomas McNaugher speculates that the Iranian government gave more credence to the chemical threat than was necessary because it diverted attention from the fact that the war was a strategic

option was not resorted to as "...a matter of simple mutual deterrence, but was due to a number of factors which happened to combine in a particularly fortuitous way,..."[42] There are at least three major factors that deterred the warring powers from resorting to chemical weapons during this conflict. First, owing to intelligence overestimates of their opponents' actual chemical weapons warfare capabilities, neither side wished to initiate chemical weapons warfare out of fear that its opponent's retaliatory capabilities were superior to its own. Second, parties in the conflicts were put off from using chemical weapons because of logistical problems and impediments to operational mobility. Finally, there was the fear that if chemical warfare escalated from the battlefield to air warfare against each other's cities, unacceptable damage would be inflicted on civilians.[43] This was due in part to the terrible memories of World War I. Although John Ellis Van Courtland Moon argues that the non-use of chemical weapons during World War II resulted more from mutual deterrence than from the pursuit of humanitarianism, he does concede that "paradoxically, the non-use of chemical weapons in the war strengthened the argument against them after the war, thereby reinforcing the humanity argument.''[44]

Chemical weapons are a turn-of-the-century technology; there are many more modern technical options available to military planners. In a discussion as to why

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mistake. By focusing on Iraq's use of inhumane weapons, Iran was trying to gloss over its own inadequate military performance. See McNaugher, 7.

[42] Utgoff, 26.

[43] See Utgoff, 26, and Chapter 3, "Testing 'Strategic Deterrence': Chemical Weapons and World War II" for a discussion of the reasons why the use of chemical weapons was considered in certain situations, but the option was forsaken. See also Sabin, op. cit., in Karsh, et al., 14-15.

[44] John Ellis Van Courtland Moon, "Controlling Chemical and Biological Weapons Through World War II", in Richard Dean Burns (ed.), Encyclopedia of Arms Control and Disarmament, (New York: Charles Scribner's Sons, 1993), 672.

chemical weapons programmes have petered out in some countries, Julian Perry Robinson makes the following observation:

> There was a slow realization that the promise held by those wartime discoveries was actually a false promise; the new technology was barren. Scientific developments were not, after all, capable of overcoming the inherent technical limitations of chemical warfare to the point where chemical weapons had more than marginal utility. [45]

In terms of technical constraints, chemical weapons are a weapon which is indirect at best. They contaminate rather than destroy directly. And this contamination depends upon the skills of the attackers, the prevailing atmospheric and geographic conditions, large enough quantities of these agents, and the degree of protection of the defender. For example, these agents are most effectively dispersed in wide open terrain, but in a city or hilly terrain, they cannot be dispersed as evenly, probably weakening the effectiveness of the agent. Air temperatures also affect dispersal, and wind can blow agents away from the intended target.[46] This means that the desired outcome of a chemical weapons attack cannot be guaranteed. Chemical weapons may not even be as lethally effective against well-protected troops as conventional weapons.[47] Protective measures can be taken against a chemical attack, such as special clothing and masks. In addition, some agents can be countered by antidotes if administered early enough after contamination. Likewise, buildings and vehicles can be specially sealed against chemical attacks, and outside surfaces can be decontaminated after a chemical assault.[48]

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[45] Robinson, op. cit., in Rioux (ed.), 59.
[46] OTA, Assessing the Risks, Table 2-2, 48.
[47] Ibid., 52.
[48] Ibid., 49.

Other criteria besides operational and logistical problems may limit the usefulness of chemical weapons as a military option. Psychological, political, cultural, and institutional factors encourage the non-use of these weapons. Conventional weapons, on the other hand, tend not to have such scrutiny attached to their use. Resorting to chemical weapons means crossing a significant threshold, of which the costs may be too high to bear. Victor Utgoff argues that chemical weapons have never been used against a state with strong retaliatory capabilities, and that chemical proliferation has not led to widespread chemical warfare. When chemical warfare has been initiated, it has tended to be restrained. For example, in the missile attacks during the Iran-Iraq War, chemical agents were not used against major cities, although they were used elsewhere.[49] The U.S. Office of Technology Assessment points out that "...political inhibitions on using the weapons may render moot their purely military effectiveness."[50] Although it is generally agreed that the major reason that Iraq did not use chemical weapons against coalition forces during the Gulf War was due to the fear of massive retaliation, this answer may be too simplistic. According to Richard Price:

> While the threat and fear of massive retaliation for the use of CW seems to have been largely responsible for inhibiting Iraq, the point being made here is that the argument of deterrence cannot be understood without recognizing the role of prior stigma attached to CW; this stigma set chemical weaponry apart as a symbolic threshold of acute importance.[51]

There has always been a long-term dislike within the military establishment of the use of chemicals, and the idea that the use of poison as a method of warfare is dishonourable. This pervasive objection to the employment of chemical weapons

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[49]Utgoff, 220.

[50]OTA, Assessing the Risks, 55.

[51]Richard Price, "A Genealogy of the Chemical Weapons Taboo", International Organization, Vol. 49, No. 1, Winter 1995, 5-6.

as a method of warfare has translated into apprehensions on their use. Frederic Brown argues that " 'The combination of personal and institutional dislike of toxic agents and the estimated marginal overall effectiveness of gas as a weapon system were insurmountable restraints on such employment.' "[52]

The military utility or the perceived military utility of chemical weapons warfare has been open to dispute and interpretation over the years. Some states have had them fully incorporated into their operational capabilities while others have retained them solely for deterrent purposes. States have sought and acquired chemical weapons not so much for their technical attributes but rather for their deterrence effect. The threat of the use of chemical weapons may instil such fear in an adversary, that they will acquire a chemical weapons stockpile for the capability to retaliate in kind. For example, it should be remembered that nuclear weapons were used only once, yet their deterrent value remains enormous. In the case of chemical weapons, however, especially in the strategic context, their potential for retaliatory threat has been diminished and hence, their justification as a weapon of deterrence.

The military utility of chemical weapons has been downgraded. Cynics would argue that this change in attitude was due to the fact that the major powers had more powerful and precise weapons in their arsenal, and that they could forgo the chemical option. Anthony Cordesman believes that the possession of chemical weapons has had little bearing on international security. Therefore:

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[52]As quoted by Sabin, op. cit., in Karsh, et al., 25, referring to F. Brown, Chemical Warfare: A Study of Restraints, (Princeton: Princeton University Press, 1968), 246.

> ...[C]hemical weapons were at best a sideshow to the issue of nuclear weapons in the East-West conflict. They did not materially affect the balance of power or propensity of violence in any Third World conflict or crisis.[53]

Julian Perry Robinson takes a similar position to Cordesman concerning the utility of chemical weapons as part of military strategy. He points out that as the confirmed use of gas warfare has only been verified in less than 12 out of the 300 wars this century, and that chemical weapons warfare is thus a rare occurrence. Hence, "that rarity [of gas warfare] must presumably say something about the military utility of CW weapons."[54]

The perceived utility of chemical weapons in the superpower context is important, as the United States and Russia retain the largest chemical weapons stockpiles and arsenals in the world.[55] During the Cold War, there was the fear that a combined Soviet chemical and conventional attack would greatly enhance a Soviet advance into Western Europe, but only if NATO could or would not retaliate in kind.[56] NATO's capability to retaliate in kind was also inferior to that of the Warsaw Pact.[57] There was a school of thought amongst certain NATO allies that a strong chemical retaliatory capability was unnecessary, as there was a nuclear option. As one West German politician has stated, chemical weapons " 'are superfluous as a means of maintaining the peace, considering the vast nuclear arsenals in the East and West....The world hardly needs a chemical deterrent on top of the nuclear

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[53]Cordesman, op. cit., in Roberts, (ed.), (1994) 34.

[54]Robinson, op. cit., in Karsh, et al., 73-76 for a discussion on the utility of CW warfare and tables of cases of actual uses as opposed to alleged uses, as taken from the Sussex-Harvard Information Bank on Chemical and Biological Warfare Armament and Arms Limitation.

[55]Brad Roberts, op cit., (1992), 9.

[56] Utgoff, 145.

[57] Ibid., 151 and Chapter 7 for a discussion of NATO and Warsaw Pact capabilities and various chemical warfare scenarios.

variety.' "[58] Eventually, the credibility of the NATO strategy of nuclear escalation to a Soviet chemical weapons attack was called into question.[59] As the scenarios for the actual use of chemical weapons were called into question, so too were the reasons for possession. One commentator on Soviet military thinking has observed that:

> The military's perception of the diminishing utility of chemical warfare in a future European war is a more compelling rational for a CW ban. The General Staff recognized in the early 1980s that future war would be dominated by long-range, high precision, advanced conventional munitions.[60]

The ending of the Cold War and the amelioration of the traditional Soviet threat and war scenarios has further eroded any potential utility of chemical weapons in this context. Chemical weapons have become an obsolete military option in the East-West context.

> The function of a chemical weapon in battle has not changed since World War I. In spite of its recharacterization as a weapon of mass destruction (oruzhiye massovogo porazheniye) in the 1960s, chemical weapons do not possess great destructive capabilities.[61]

If the military utility of chemical weapons is considered limited, then can they still be considered a weapon of mass destruction? Chemical weapons have been lumped together under the rubric "weapons of mass destruction" along with nuclear and biological weapons. They have also been labelled the "poor man's atomic bomb". The perception of what constitutes a weapon of mass destruction depends on whichever stand-point one is taking. Chemical weapons debilitate

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[58] Elisa Harris, "Chemical and Biological Arms Control: The Role of the Allies", in Fen Hampson, Harald von Riekhoff, and John Roper, (eds.), The Allies and Arms Control, (Baltimore: The Johns Hopkins University Press, 1992), 79 and note 25.

[59] Roberts, op. cit., (1992), 12. Robert points out that "The prevailing view was that such a threat [A NATO nuclear escalation to a Soviet chemical attack] would serve to lower the nuclear threshold at a time when NATO was seeking to raise it, and was also struggling with broader problems regarding the credibility of its nuclear strategy."

[60] Stephen Covington, "The Evolution of Soviet Thinking on the Utility of Chemical Warfare in a Major European Armed Conflict", in Krause, (ed.), op. cit., 7.

rather than destroy. In a U.S. Office of Technology Assessment comparison of the lethality and destructiveness of biological, chemical, and nuclear weapons in neutral conditions, chemical weapons ranked a dismal third. A 12.5 kiloton TNT equivalent Hiroshima-type atomic bomb would affect 7.8 square kilometres of terrain and cause between 23,000-80,000 deaths. One 1 megaton hydrogen bomb would affect 190 square kilometres and cause 570,000-1,900,000 deaths. Thirty kilograms of anthrax spores (biological weapons) would contaminate an area of 10 square kilometres and cause between 30,000 to 100,000 casualties. Yet, three kilograms of chemical weapons such as Sarin nerve gas would contaminate .22 kilometres and kill between 60-200 people.[62] More importantly, the OTA study points out that chemical weapons should not be considered the "poor man's nuclear weapon", as the ratio of deaths to injuries in World War I and the Iran Iraq War were relatively low.[63]

Chemical weapons, it must be remembered, do not destroy infrastructure and some of its agents are merely incapacitants. In addition, there are other military alternatives that may be more efficient. Indeed, "the military non-use of chemical weapons during Desert Storm appeared to have sealed their fate as totally obsolete in the face of modern technology."[64] In a discussion on the merits of chemical weapons, Anthony Cordesman states that:

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[61]Ibid., 6.

[62]see Table 2-1, OTA, Assessing the Risks, 53 and Cordesman, op cit., in Roberts, (ed.) (1994), Table 5-2, 48.

[63]OTA, Assessing the Risks, 58 quoting Pelletiere and Johnson, Lesson Learned: The Iran-Iraq War (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 1991), Appendix B Chemical Weapons, 100.

[64]Zanders, 88.

> It is highly unlikely that the CWC will have any meaningful impact on human suffering or the level of violence used in future conflicts, not because chemical weapons are unimportant but because there are so many alternatives....The fact that the CWC is unlikely to impact the cumulative levels of suffering in future conflicts is not an argument for decontrol of a major killing mechanism. It is an argument against unrealistic expectations about the result. [65]

It could also be argued that the military utility of chemical weapons has been transformed from a weapon of mass destruction to a weapon of terror. According to Jay Brin:

> Chemical weapons still pose a significant military threat to poorly equipped armies and unprotected civilians, as was demonstrated by Iraq's effective use of these weapons against Iran and its own Kurdish population.[66]

Simply because the military utility of chemical weapons has diminished in the traditional East-West context does not mean that other states or actors are not trying to acquire them. Utility may be in the eye of the beholder. As the U.S. Office of Technology Assessment points out: "...these weapons may also be sought for symbolic, deterrent, intimidating, or terrorist purposes that may not be simply related to their value from a purely military perspective."[67] Chemical weapons may be seen as useful to weaker states because their possession evokes a sense of fear; in turn, those who are feared also come to possess a sense of power, be it real or perceived. It should also be pointed out that since World War I, most cases of chemical weapons use and proliferation have been situated in the Third World. It is estimated that about seventeen states are known to possess chemical weapons, and about fourteen are situated in the Middle East or East Asia.[68] There is no real historical precedent of chemical weapons use in a major confrontation in these regions, the exception being the Iran-Iraq War. In the Western European

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[65]Cordesman, op. cit., in Roberts, (ed.), (1994), 35-36.
[66]Jay Brin, "Ending the Scourge of Chemical Weapons', Technology Review, April 1993, 34.
[67] OTA, Assessing the Risks, 7.

context, the large-scale use of these weapons led to a very strong revulsion against their further use. But Western experiences and perspectives are not always the norm in other parts of the world.

Chemical weapons are also easier and less expensive to manufacture than nuclear weapons, and it might be a more practical and less expensive option to develop them as a weapon system. The numerous conflicts and insurgent movements endemic in less developed countries might also provide a tempting environment for using these weapons.[69] If a particular Third World actor does not have nuclear capabilities or has weaker conventional capabilities than an adversary, or both, it may be attractive to have a long-range chemical weapons capability, with which to threaten an adversary's cities at the very least. Weaker states may perceive the acquisition of chemical weapons as a force multiplier to help offset their conventional inadequacies.[70] In addition, certain states view chemical weapons as a deterrent against attacks by nuclear powers. A chemical weapons capability is a source of pride to certain Third World states, as these weapons are still at least perceived as a weapon of mass destruction. They may be used as a substitute for nuclear weapons or as a stopgap measure.[71] Having the ability to use them would certainly enhance a particular state's military potential. It is the use of chemical weapons against insurgent groups that probably remains the most dangerous capability within Third World states. For example, the Iraqi government employed

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[68] Utgoff, 199.

[69] Ibid., 199.

[70] Edward M. Spiers, "The Role of Chemical Weapons in the Military Doctrines of Third World Armies", in Krause, (ed.), op. cit., 43.

[71] Martin Navias, "Third World Demand for Weaponry and Missiles", in Trevor Taylor and Ryukichi Imai, (eds.), The Defence Trade, Demand, Supply and Control, (London: Royal Institute for International Affairs, 1994), 45.

chemical weapons against the Kurds; a fairly cost-effective way of driving out the unprotected masses.[72] The danger from non-state actors such as terrorist organizations using these weapons also remains a major threat, as evidenced by the Sarin gas attack in March of 1995 on the Tokyo underground.

The military utility of chemical weapons warfare seems to be dubious at best, but this has not stopped some states from seeking to acquire or use them. Although there is a prevailing international norm against their use from military, legal, political and moral perspectives, not all actors in the international system conform to this perspective. Their perspectives are based upon their own security needs. It should be remembered that states tend to support norms when it is in their interest to do so. Most states have refused to cross a certain line in initiating chemical warfare; many if not most of these states have assessed that these weapons are not as useful as they were once perceived to be. Paradoxically, the few cases in which countries have not observed the norm against the use of chemical weapons may encourage proliferation of these weapons. The irony of this situation is that while the traditional sources of the chemical weapons threat have diminished, the likelihood of their being used somewhere else has increased.

[72] In the insurgent context, chemical weapons may be cost-effective as there is little risk of retaliation from insurgents, less manpower resources are needed, and heavy casualties can be inflicted on insurgents, forcing them to flee. See Spiers, op. cit., in Krause, (ed.), 45.

Section 2.2-A Physical Description of Land Mines

According to the definition under Article 2 of the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Protocol II) of the Convention on Conventional Weapons:

> 'Mine' means any munition placed under, on or near the ground or other surface area and designed to be detonated or exploded by the presence, proximity or contact of a person or vehicle, and 'remotely delivered mine' means any mine so defined delivered by artillery, rocket, mortar or similar means or dropped from an aircraft.[73]

A land mine is a lingering weapon which cannot distinguish between civilian or soldier either in time or in intent. Land mines contain numerous activation and explosive features, but the one feature that all land mines have in common is their ability to maim and kill without discrimination.

There are two basic types of land mines: anti-personnel, and anti-tank or anti-vehicle. Anti-tank mines are larger, since they are designed to destroy large vehicles rather than people. An anti-personnel mine, on the other hand, could be small enough to fit in the palm of one's hand.[74] The average anti-tank mine would require about 100 kg of pressure to be activated, and most vehicles would easily meet this requirement, detonating about 6 kg of explosives in the process.[75]

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[73]The definition of a mine as defined in Article 2, Definitions, paragraph 1 of The Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Protocol II) of the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects.

[74]Small modern plastic anti-personnel mines may be as small as 6 cm in diameter. See United Nations General Assembly, Forty-Ninth Session, "Assistance in Mine Clearance", Report of the Secretary General, 6 September 1994, UN Doc. A/49/357, 2 (Hereafter UN, "Assistance in Mine Clearance").

[75]Ibid.

Anti-tank mines should still be considered to be dangerous. These mines can have anti-handling devices, and can also be adapted for anti-personnel use.[76] Many civilians still fall victim to these mines. In just a few of the recent press reports 22 Angolans died and 14 were injured when a truck in which they were travelling ran over an anti-tank mine in the province of Moxico; in Southern Grozny, one child and nine adults were killed when a bus evacuating refugees hit a mine.[77] Anti-tank mines can kill or injure civilians engaged in routine activities, albeit with less frequency than anti-personnel mines. There is also the problem of naval mines which can cause much havoc to shipping.[78] It is ironic that the international community rushed naval mine-sweepers to the Persian Gulf during the Iran-Iraq War to protect oil shipments but were more apathetic about the more pressing humanitarian mine problem, the anti-personnel mine. This is the mine most known for affecting both the individual and society. This study will focus on anti-personnel mines, as they are the ones which cause the most damage.

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[76]Anti-Handling or Anti-Lift devices were developed to prevent the mine from being picked up or easily deactivated. If they are handled in the wrong manner they may detonate. In addition, AT mines can be modified to detonate under less pressure.

[77]See *The European,* 10-16 March 1995, 8 and *The Guardian*, 20 February 1995, 9 for these reports.

[78]There have been proposals made for a naval mines draft protocol to the CCW to update the 1907 Hague Convention Relative to the Laying of Automatic Submarine Mines. It was felt that advances in naval mine technology required an update of protective measures against these mines. This issue was not highly prioritized for the Review Conference's work as land mines were the primary focus. This draft protocol was also introduced to the UNGA as DOC. A/C.1/46/15. See "The Rationale for Considering Other Proposals Relating to the Convention and to its Existing or Future Protocols", *Group of Governmental Experts to Prepare the Review Conference of States Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects*, Background Documentation Prepared by the ICRC, July 1994, 23-24 (Hereafter ICRC, Background Document, July 1994).

There is controversy as to whether other types of munitions should also fall under the definition of a land mine, specifically in the case of sub-munitions. Sub-munitions include bomblets, cluster bombs, and grenades, all usually remotely delivered. It has been estimated that some 30 million sub-munitions were launched during the Gulf War and 30% of all aircraft weapons dispersals were cluster bombs.[79] Significant quantities of sub-munitions that failed to explode were also found in Kuwait after the Gulf War.[80]

> In recent years, technological and tactical developments have increasingly blurred the line between scatterable mines and the much broader range of rocket and aircraft delivered bomblets, cluster bomb units (CBUs), and other submunitions, which are often anti-personnel in their deployment and effect.[81]

Mine-clearance expert Rae McGrath goes a step further than the above definition, believing that the actual definition of anti-personnel mines should include sub-munitions because they "become de facto anti-personnel mines when deployed in such a manner that they do not explode on impact".[82] When sub-munitions hit the ground and do not explode (the dud factor) the unpredictability of a future detonation makes them function like an anti-personnel mine. Their physical effects are also similar to land mines. There have been suggestions that any sub-munition with a delayed action fuse beyond a certain time limit should be classified as a land mine.[83] Sub-munitions are also referred to in the more generic sense (once

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[79]See the Arms Project of Human Rights Watch and Physicians for Human Rights, Landmines: A Deadly Legacy, (New York: Human Rights Watch and Physicians for Human Rights, 1993) 347 (Hereafter HRW, A Deadly Legacy), in reference to a presentation by William Arkin to the NGO Conference on Antipersonnel Landmines, London, May 24, 1993, 5.

[80]Ibid., 53, in reference to John Taffe at the ADPA Symposium describing unexploded U.S. Rockeye munitions found by demining teams in Kuwait.

[81]Ibid., 42.

[82]Comments reported in Robert Block, "Bomblet Casts Doubt on Export Policy", *The Independent*, 6 June 1994, 10.

[83]ICRC, Background Document, (July 1994), 21, in reference to possible solutions discussed during an Experts Meeting on Conventional Weapons convened by the ICRC in Geneva May 30-June 1 1994.

actually on the ground) as unexploded ordnance.[84] The U.S. Department of State, however, does make a distinction between land mines and sub-munitions or unexploded ordnance (UXO):

> While the damage caused by UXO can be the same as that caused by landmines, it is important to note the differences between the two. A landmine is a weapon which is designed to detonate upon proximity of its target. The use of landmines, as a distinct class of weapons, is subject to doctrinal and international legal controls. UXO is a dangerous, uncontrollable, long lived waste product of a battle, and is only present after combat because it did not function according to its design. In addition, UXO is generally located on the ground surface, not buried like land mines, and UXO casings are metal, which make buried UXO much easier to detect than modern plastic mines.[85]

It should be pointed out that sub-munitions only take on the properties of land mines when they fail to work correctly. A British MOD official makes the point that if these weapons are reclassified, then there is the danger other weapons will be placed in these categories simply because they are flawed. But as Human Rights Watch (HRW) argues, when land mines are actually classified as sub-munitions, there is the danger that these weapons could be used to circumvent controls; they could be deliberately designed to not explode on impact, thereby becoming a land mine under another guise.[86] It is not the purpose or place of this

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[84]UN, "Assistance in Mine Clearance", 5.

[85]U.S. Department of State, Bureau of Political Military Affairs, Hidden Killers: The Global Landmine *Crisis*, *1994 Report to the U.S. Congress on the Problem with Uncleared Landmines and the United States Strategy for Demining and Landmine Control*, (Washington: December 1994), 8 (Hereafter DOS, Hidden Killers).

[86]According to the HRW there are differences between the official classifications of mines in the U.S. Army Countermine Systems Directorate, Fort Belvoir, Research, Development and Engineering Center WorldWide Informational Mine Guide 1993, (Army Database) and that of the Defense Intelligence Agency and the U.S. Army Foreign Science and Technology Center, Landmine Warfare-Trends and Projections. Also see *The Independent*, 6 June 1994, 10.

study to debate the merits of this argument although it is an troubling side issue to the whole land mines debate.[87]

Mines were first used as a weapon system towards the end of World War I when German forces utilized buried shells to halt attacks by British and French tanks. The development of a lightweight form of TNT explosives in the 1920s led to the creation of the modern form of anti-tank pressure mines. Since anti-tank mines could be picked up and replaced, a need developed to place protective mines around them; hence, anti-personnel mines were developed as anti-lift devices for anti-tank mines.[88] These rudimentary anti-personnel mines were composed of small containers holding explosives which were set off by pressure and emplaced around an anti-tank mine for protection.[89] When anti-tank mines started to incorporate built-in anti-lift devices, anti-personnel mines were developed as a military weapon in their own right. By World War II, the experimentation was over and both mine types were used extensively by all parties to the conflict.[90] The majority of anti-personnel mines in existence today were created from technology being used between World War II until the mid-1970s. Although these systems are limited in some respects and rather rudimentary in design, they still remain effective and deadly. Some of these older metallic mines have been in the ground for decades and still present a hazard; others have corroded through exposure, become unstable, and should be considered hazardous. In the past twenty years,

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[87]For a further detailed study on the leftover munitions from war see Arthur H. Westing, (ed.), Explosive Remnants of War: Mitigating the Environmental Effects, SIPRI and UNEP (London: Taylor & Francis,1985)

[88]Interview with Tore Skedsmo, Deputy Demining Consultant, Department of Peacekeeping, United Nations, New York, January 1995.

[89] HRW, A Deadly Legacy, 17.

mines have become extremely sophisticated thanks to advances in electronics and miniaturization technology.[91]

The most common mine types found in conflict zones are the basic conventional anti-personnel mines using dated design and technology. As they are technologically rather unsophisticated, they have been easy to mass-produce and copy. They are also manually emplaced. The next level of mines are the scatterable anti-personnel mines. These mines are disseminated by remote delivery systems such as launchers, aircraft, and artillery. Although they can cost about 10 to 50 times the price of regular conventional mines, they are more cost-effective in terms of sheer volume and efficiency; some systems can deploy over 1,750 mines per minute.[92] The more advanced mines can be categorized as "Improved Conventional Mines". These mines are especially dangerous as they are small and light-weight, almost entirely plastic, difficult to detect and easily portable. As these mines also encompass more advanced technology than their rudimentary ancestors, they are sometimes difficult to deactivate and may contain anti-handling devices.[93] The portability, low cost, and detection factors make these mines a particularly popular choice of weapon in low-intensity or guerrilla warfare.

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[90]For a brief description of this history see William Fowler, "The Devil's Seed", Defence, August 1992, 11 and DOS Hidden Killers, 3.

[91] Hamish Rollo, "The Military Use of Anti-Personnel Mines", in ICRC Report, Symposium on Anti-Personnel Mines, Montreux, (Geneva: ICRC, 1993) 213-214 (Hereafter ICRC, Montreux Symposium).

[92]For example, the Italian Valsella vehicle mounted Istrice Mine Scattering System can dispense 1,750 mines a minute. See HRW, A Deadly Legacy, 38-41 for a description of these mine types.

[93]Ibid, 43 and Vehbi Dincerler, "Landmines and Mine Clearance Technologies", Scientific and Technical Commitee, North Atlantic Assembly, (NAA), STC (95) 13, October 1995, 2-3.

Most mines also have standard explosive properties. The "blast" anti-personnel mine is the most common mine type; the victim simply needs to step on the mine to activate it, which sends the mine materials and other debris up the leg of the hapless victim. The result of this blast can usually kill a child, or require amputation in the case of adults. Victims can die of shock or infection when immediate medical attention is not available.[94] A "fragmentation" mine is usually supported on a stake and activated by a tripwire; a victim walks into it and the mine is detonated sending fragments into an area of 20 metres. Unlike the blast mine the fragmentation mine has the capacity to injure anyone within those 20 metres. An even more devastating version of this mine is the directional mine. This mine scatters fragments in a particular direction of up to 50 metres. An example of this type of mine is the U.S. Claymore mine which sends about 700 steel balls out on a 60 degree arc over 50 metres, effectively wounding just about everyone in that vicinity. Bounding mines combine blast and fragmentation properties; when pressure is applied or a tripwire is activated, the mine body is projected upwards and explodes above ground, sending fragments over a wide area.[95] All these mines have extremely destructive consequences for human beings.

Mines can also be classified according to their destructive properties. Most older mines tend to be non-self-destructing (NSD), and remain in the ground until they are detonated. In contrast, self-destructing (SD) mines, as the name suggests, destruct after a certain time period. It is estimated that 10-20% of these mines fail

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[94] HRW, A Deadly Legacy,19. and Dincerler, 5.
[95]Ibid., 20

to self-destruct.[96] Unofficial sources argue that a 30% failure rate is a more realistic figure.[97] It is interesting to note that there are a number of cases where mine clearance operators have come into contact with self-destructing mines which have failed to detonate. Rae McGrath claims that mine clearance teams have come into contact with failed self-destructing mines in Laos 22 to 29 years after they were originally sown; they were designed to self-destruct in 120 hours. It has also been reported that post-Gulf War deminers in Kuwait found U.S. GATOR SD mines which had failed to detonate, though once again no exact numbers were provided.[98]

Regardless of the true figures, however, McGrath correctly points out that these figures are virtually irrelevant since mines can be sown in the millions; thus even a 10% failure rate presents a significant hazard. From a mine clearance perspective, every mine will still have to be found and cleared.[99] While self-destructing mines would save some lives by destroying themselves, it is their unpredictability that remains a danger to the civilian population. Civilians can never be certain when the mines will actually explode, and can still be injured or killed by these mines if they happen to be in the vicinity at the wrong time. Also, if there are no set time

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[96]The figure of 10% is reported in "The Land Mine Crisis: Humanitarian Disaster: What Can be Done?" Forum held at the United Nations on 16 November 1994 as reproduced in *Ending Reliance on Nuclear and Conventional Arms*, Disarmament, (New York: United Nations, 1995), 122 (Hereafter referred to as UN Land Mine Crisis Forum), and Paul Jefferson, "Technical Aspects of Anti-Personnel Mines" in the ICRC Montreux Symposium, 106. The figure of 20% is reported in the public press; L. Doyle, "West Finds Riches in Deadly Mine Trade", *The Independent*, 6 June 1994, 10.

[97]It has been alleged that studies have been conducted testing the failure rate for these mines, and that the failure rate has been on the high side. The results of these studies have not been released, the implication being that if the 10% rule was valid, governments would have been eager to release them.

[98]Attributed to John Taffe as quoted in HRW, A Deadly Legacy, 53.

[99]Interview with Rae McGrath.

limits, civilians will have to continue to exercise extreme caution. This means that if civilians need the surrounding land for daily subsistence, they will either have to take their chances or declare the land unusable.[100]

Yet additional varieties are the self-neutralizing (SN) and self-deactivating (SDA) mines whose internal mechanisms render them harmless. These mines also are problematic. If a self-neutralizing mine fails, it has to be treated as a real mine, for there is no way to differentiate between one that has been neutralized and one that requires neutralization. According to Human Rights Watch:

> It is difficult to persuade anyone to walk into a minefield where mines are still visible. Civilians will not know for certain when a mine is no longer active, and if they cannot be sure it is safe, they will not return to occupy the land. Not only will civilians be denied use of the land but deminers will also have to clear entire fields just as if each mine were live. It involves exactly the same amount of time and cost.[101]

Their failure rates, unpredictability, and difficulties in distinguishing between active and inactive states of these mines make them hazardous to those in their vicinity. They are an improvement to the non-self-destructing mines, but they do not make mines absolutely safe.

Section 2.2.1-Military Utility/Use of Mines

Mines can be used for legitimate military purposes under the guidelines of international law. Experience has shown, however, that there is a fundamental problem with mine use: the onus is on the mine-layer to place the mines correctly. In the current environment, irresponsible practices by too many have allowed

[100]HRW, A Deadly Legacy, 345.
[101]Ibid., 344-345.

mines to be used as an indiscriminate weapon. This section will discuss the various aspects of the military utility of such mines and the realities of their use.

In today's modern militaries, combat engineers are supposed to lay the mines in a particular pattern, since they would have to be systematically removed in the future as required by military strategy and international law. It is considered prudent to mark these mines, because one's own troops may have to retreat through them. Therefore, it is important to know where the mines have been laid. For example, during the Vietnam conflict, U.S. forces sometimes had to retreat through minefields they had remotely delivered.[102] In the current state of widespread hit-and-run warfare, it is not likely that forces would be willing to take the time to mark minefields or acquire the capabilities to do so. As Garth Whitty points out: "Mine fields were marked because it was assumed that the land would be retaken. But the use of mines by irregular forces in civil and ethnic conflicts, such as those in Cambodia and Angola, have nullified these assumptions."[103] In this type of warfare, it is usually considered strategically advantageous if the opposing side does not know exactly where the mines are. This intimidates civilians and combatants alike.

In regular military strategy mines serve three basic purposes: they can protect military bases or sensitive border areas; they can be used to channel or divert

[102] HRW, A Deadly Legacy, 18.
[103] Jim Wurst, "Ten Million Tragedies, One Step at a Time", The Bulletin of the Atomic Scientists, July/August 1993, 15.

enemy forces into a particular direction; they can deny routes and positions to enemy.[104] According to Terry Gander:

> ...[T]he main military function of mine warfare today is to inflict delay upon the enemy. Modern military tactics involve the speed of movement and manoeuvre, coupled with firepower, to defeat an enemy, so any time delay or physical hindrance which can be imposed upon an enemy by the introduction of landmines is to the advantage of the defender. [105]

Mines are also used to ambush the enemy at particular locations and as a guard device to alert troops that an enemy is nearby.[106] Land mines are best utilized as a force multiplier. Land mines enhance the lethality of land and air weapon systems; they can increase the cost-effectiveness of these air weapon systems three-fold as compared with them being deployed alone.[107] The development of remotely delivered scatterable mines can be used offensively to separate an enemy from its supply lines, to force the enemy into a less advantageous position, or simply to protect one's own forces during an offensive thrust. Remotely delivered mines can be deployed deep behind enemy lines and enhance the offensive potential of mines.[108]

Mines also have an insidious military utility in terms of psychological warfare, as most mines are designed to maim rather than kill. In a cold logistical sense, a wounded soldier is more of a liability on the battlefield than a dead one. A soldier in pain requires medical attention which may distract other combatants and instil fear in his comrades as they wonder whether they too will unwittingly step on a

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[104] Rae McGrath, "The Reality of the Present Use of Mines by Military Forces", in ICRC, Montreux Symposium, 8; Dincerler, 3. Also, in an interview, Tore Skedsmo discussed these aspects of military utility.

[105] Terry Gander "Anti-Personnel Mine Warfare-An Outline", in ICRC, Montreux Symposium, 203.

[106] Ibid., 203-205.

[107] Lt. Col. N. Hamish Rollo, "The Military Use of Anti-Personnel Mines", in ICRC, Montreux Symposium, 212.

mine. Even in military strategy the land mine has an aspect as a terror weapon, its very elusiveness and unpredictability make troops proceed with caution.[109] As an added tactical advantage, if troops have to proceed with caution, then they are further delayed by having to carefully breach a mine field in order to ensure safe passage.[110]

The long-running, mostly internal conflicts that have characterized the state of war over the past few decades have also produced a shift in the military role of land mines. Previously, mines were used mostly as a defensive support weapon; now they are being used more extensively and offensively, owing to more sophisticated technology. According to Kenneth Anderson:

> Landmines have now evolved from a tactical, defensive, battlefield weapon to an offensive, sometimes even strategic, weapon operating in environments far larger than what classically would have been regarded as the "battlefield".[111]

Most of modern day conflicts tend to be fought on continually changing battlefields, with very large portions of a country being used as the war theatre. The most common type of conflict where these type of conditions prevail are in counter-insurgency scenarios. The counter-insurgency scenario can take the form of government and opposition forces fighting an internal conflict, or an outside actor pursuing a conflict on behalf of the regime they want in power. As a result, random wide-scale mining of agricultural or communal land, villages, water

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[108]See HRW, A Deadly Legacy, 22 and DOS, Hidden Killers, 7.

[109]see ICRC, "Landmines; Time for Action", ICRC Public Information Brochure, May 1994, 8; see also Gander, op. cit. in ICRC, Montreux Symposium, 205, for a discussion of the psychological effects of mine warfare.

[110]"Breaching" is a military term for clearing a path through a minefield to facilitate movement. It does not imply that the entire minefield will be cleared.

sources, and shrines takes place as a form of terror warfare against civilians. The military justification for this indiscriminate mining is based on the premise that as the enemy is all over the community, it is justifiable for the target range to be increased. This justification allows the aggressor to treat the whole community as a military target. For example, in the Afghanistan conflict, Soviet forces in conjunction with the Kabul government mined large tracts of mountain grazing land to bring to a halt the agriculture and husbandry industries of the region, in their pursuit of the Mujahideen rebels. While food to the enemy is restricted, it is restricted to the civilians as well.[112] In these types of conflicts, respect for civilians appears minimal. The combination of technological advances, the structure of warfare, and violation of the rules governing land mines all contribute to alterations in the military utility and use of land mines.

Although land mine use is considered a legitimate part of military strategy, there is controversy within the military establishment itself as to its effectiveness as a weapon system. According to one military expert:

> I know of no situation in the Korean War, nor in the five years I served in South-east Asia, nor in Panama, nor Desert Shield-Desert Storm where our use of mine warfare truly channelized the enemy and brought him into a destructive pattern....I'm not aware of any operational advantage from broad deployment of mines.[113]

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[111]Kenneth Anderson, "An Overview of the Global Land Mines Crisis", in Kevin Cahill, (ed.), Clearing the Fields Solutions to the Global Land Mines Crisis, (Basic Books and The Council on Foreign Relations: New York, 1995), 20.

[112]Rae McGrath, op. cit. in ICRC, Montreux Symposium, 9-10.

[113]Former Marine Corps Commandant Alfred Gray Jr., as quoted in Stephen S. Rosenfeld, "America Doesn't Need Landmines", *International Herald Tribune*, September 25, 1995, 10.

In the Vietnam war, it is estimated that between 30-70% of battlefield casualties were caused by land mines.[114] Recent studies regarding the military utility of mines have concluded that mines are of marginal utility.[115] Mines also pose a hazard to peacekeeping operations around the world, endangering those sent to keep the peace.[116]

Section 2.2.2-Proliferation of Land Mines—Why Now, Why So Bad?

> Like a deadly disease long absent and assumed conquered, the land mine, that scourge of the battlefield of World War I, has reemerged on a scale unimagined and with hideous, unanticipated effects. There is today a global land mine crisis. And while it began as a military problem, it is now an ongoing humanitarian disaster.[117]

According to the United Nations and the U.S. Department of State there are 110 million land mines littering the land in 64 countries, and from two to five million more are being laid each year.[118] Unfortunately, even with all the current demining programmes which have been established around the world, only about 130,000 mines were removed in 1993, and 100,000 removed in 1994. There is significant deficit in what is being removed as opposed to what is being added.[119] In addition,

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[114] According to DOS, Hidden Killers, 7, some 16% of total deaths in Vietnam were a result of land mines although it is possible the figure could be as high as 30%. The figure for one-third of all casualties is quoted by Richard Johnson in Cahill, op cit., (1995), 37. The figures for 65-70% casualties are taken from 1965 estimates of U.S. Marine Corps casualties and do not detail which parties' mines actually caused these casualties. Information is quoted from U.S. Defense Intelligence Agency and U.S. Army Foreign Science and Technology Center (DIA/FSTC), Landmine Warfare-Tends and Projections, December 1992,DST-1160S-019-92, p2-1 as referenced in HRW A Deadly Legacy, 17.

[115] The Institute for Defense Analyses "found that APMs help in few battlefield situations, and even then extra firepower can compensate." Another study by a panel of military experts published by the ICRC also came to the conclusion that mines are of marginal military utility. See Tom Masland and John Barry, "Buried Terror", Newsweek, April 8, 1996, 28.

[116] In Somalia, for example, 26% of U.S. casualties were caused by land mines. See Kevin Cahill, (ed.), Clearing the Fields Solutions to the Global Land Mines Crisis, (New York: Basic Books and The Council on Foreign Relations, 1995), 3.

[117] Boutros Boutros-Ghali, "The Land Mine Crisis", Foreign Affairs, September/October 1994, 8.

[118] Figures quoted in DOS Hidden Killers, 1 and UN, "Assistance in Mine Clearance", 2.

[119] Figures according to David Gowdey, UN DHA Demining Consultant and Dincerler, 1.

it is estimated that there are about 100-150 million mines stockpiled.[120] For the immediate future, it is not imperative to remove all these mines because some are in very remote positions and tend not to endanger civilians. Cordoning off land, however, is only a temporary solution, as the land may be needed in the future. For example, the Egyptian government is now searching for ways to clear mine-saturated regions as population demands increase.[121] As Rae McGrath argues, one should not necessarily look at total mine numbers, and total mine removal numbers, as the problem and the solution. It is the intrinsic value of the land which is important.[122] In a state like Eritrea, 500,000 land mines are a big problem as refugees need to be repatriated within a rather small area, and resources are very limited. In Iraqi Kurdistan, although 60% of minefields are marked, civilians are in constant danger as they must use the land for daily subsistence. In Cambodia, mines are just about everywhere and are a fact of daily life.

The regions most plagued by the land mine problem are primarily situated in Third World conflict-ridden states. According to one demining expert, "You go to a place like Cambodia or Angola, and your odds of finding mines are astronomically high. Like Mardi Gras Beads on Fat Tuesday in New Orleans."[123] As a result of decades of conflict, the African continent is the worst affected by land mine

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[120] United Nations, "The Unfinished Disarmament Agenda", Disarmament, (Special NGO Committee for Disarmament: Geneva, February 1995), 31.

[121] DOS, Hidden Killers, 4, (1993 edition) estimates that about 30% of mines could fall into the category of secondary priority for mine removal.

[122] Whether an area is heavily or lightly mined does not matter in terms of demining efforts; the deminers still have to look for all the mines. Progress is actually judged by the clearance of land that is crucial to infrastructure such as agriculture, irrigation, grazing or where it interferes with civilians' daily lives. (Interview with Rae McGrath).

[123] Statement of Floyd Rocky Rockwell, Mine Field Supervisor for Conventional Munitions Systems, (CMS) as quoted in Donavan Webster, "It's the Little Bombs that Kill You", *The New York Times Magazine,* January 23, 1994, 5.

proliferation, with 30 million land mines spread over some 18 states. Some of the most mine ridden states in the world include Cambodia (8-10 million), Afghanistan (10 million*), Angola (9 million), Iraq (up to 10 million), and about 2-5 million in the former Yugoslav republics.[124]

> The situation caused by the use of modern landmines is a pertinent example in this respect. These weapons have always been considered normal conventional weapons and certainly not weapons of mass destruction that merited important international arms control measures. However, a certain amount of thought and foresight would have shown that the introduction of plastic mines which can be sown in large quantities, which are cheap and widely available, and which remain active for an indefinite period would lead to the grave situation we now face. The international community does not have to wait for catastrophes to happen, but rather can anticipate probable dangers. In this respect it needs to take into account the types of conflict that actually occur and the way in which weapons proliferate. Once a weapon is fielded it is very difficult to stem its proliferation and widespread use. [125]

There are a variety of reasons why the global land mine crisis has occurred. First, the availability of these mines has increased. Forty-eight states have produced at least 340 types of anti-personnel mines, and at least 29 countries have exported them.[126] It must be noted that not all of these states still export these mines. Many governments have been accused of doing too little to stem the proliferation of land mines, as economic interests were at stake. According to David Gowdey, Demining Consultant to the United Nations Department of Humanitarian Affairs:

> As for the question of economics, very few states make alot [sic] of money on the question of land mines. I believe that one F-16 fighter sale would make more for the U.S. than the revenue for all the land mines they have sold in the last twenty

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[124]See UN, "Assistance in Mine Clearance", 15-20 and DOS, Hidden Killers, 15. Both U.S. and UN sources estimate that there are probably 9-10 million uncleared land mines in Afghanistan, but that the number could be as high as 35 million. See HRW, A Deadly Legacy, 145.

[125]See "The rationale for amending Protocol II of the 1980 Convention", *Group of Governmental Experts to Prepare the Review Conference of the State Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to have Indiscriminate Effects*, Background documentation prepared by the ICRC, April 1994, 2. (Hereafter ICRC Background Document, April 1994).

[126]See HRW, A Deadly Legacy, 8-11 for a detailed description of these trends.

> years When you are talking about sales that total maybe $3 million a pop, you are talking about small change in the international arms trade.[127]

Although the land mine industry *per se* is not very large compared to the rest of the armaments industry, land mines are still exported in very large quantities due to the low unit cost of production.[128] It is difficult to gain an accurate fix on the total number of mines produced and sold.[129] Quite often, mines are included as a part of larger arms deals.[130] In the West, mines are not a large part of the defence budget, nor are there many companies whose sole interest lies in mine manufacture only. In addition, as mine technology tends to be simple to replicate, numerous other countries may in fact produce land mines either under direct license or as unofficial copies of the original.[131]

Advances in technology have made mines more difficult to detect and more deadly to remove. Remotely delivered mines have also made it possible to sow mines in vast quantities, with more speed and with less accuracy. Remotely delivered mines are almost impossible to map once dispersed.[132] Even if the location of mines are known, climatic conditions can shift the mines over time, and additional mines may come to overlay the old. Also, local authorities may be reluctant to divulge

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[127]Personal communication with David Gowdey.

[128]Ferrucio F. Petracco, "Anti-Personnel Mines Production and Trading", in ICRC, Montreux Symposium, 24.

[129] Land mine holdings are not listed in the UN Register of Conventional Weapons and even large research groups like SIPRI hardly have any information on these weapons. Part of the reason is that it is difficult to track small, light weapons, and land mines are sometimes attached to larger ticket items.

[130] Wurst, 17.

[131]Christopher Foss, "The Trade in Mines: Manufacturers, Exporters and Importers", in ICRC, Montreux Symposium, 19-20.

[132]Factors such as weather conditions, means of delivery, and navigation skills all influence the accuracy of defining the general area of mine targets; borders are always difficult to define, and an air dispersion especially makes it very difficult to accurately mark any object. For example, an aircraft travelling at a speed of 625 km/hr from a height of 300 metres could not possibly be able to

the location of mines because they may want to keep them for protection.[133] It is also very difficult to develop demining techniques to clear randomly scattered mines that may be buried in undergrowth and jungle and beneath structures. By their very nature, according to the U.S. Department of State "...it is one of the characteristics of mines that while they are extremely easy to lay, they are also extremely difficult to detect and destroy."[134]

Further exacerbating the land mine problem is the fact that it has largely been ignored at the domestic and international political level. For years, land mines were causing problems mostly in poorer regions of the world, but they were not perceived to be a problem for the major powers.[135] Had these proliferation problems been prevalent in the centres of power, it is more than likely that something would have been done about their effects a long time ago. As one demining consultant has observed:

> If land mines were being laid in New York, Paris, London, Moscow and Beijing- there would be as much work put into restricting them as is put into nuclear missiles. However, the reality is that land mines are strewn mostly in the Third World and they do not present the menace to the big powers posed by nuclear missiles.[136]

On the domestic front, tensions between civilian and military sectors, or whichever groups are vying for power in a particular country, have also hindered

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precisely designate the locations of the mines being dropped. For this reason, it is also very difficult to designate a single military target as a mine objective. From Rae McGrath, (lecture).

[133]See UN, "Assistance in Mine Clearance", 3-4.

[134]See DOS, Hidden Killers, p ii.

[135]In defence of the major powers, Third World countries have preferred non-interference in their affairs, and it can be difficult politically for outside actors to balance the interests of sovereignty with that of humanitarian intervention.

[136]Correspondence with David Gowdey.

control efforts.[137] It is difficult enough to bring these factions to the negotiating table, let alone to reach agreement on the need for a unified arms control agenda. Perhaps most tragically in the political sphere is the fact that very few parties, whether internal or external to these conflicts, have ever recognized or cared to recognize the growing menace of land mines. If any party did identify these dangers, their voices were effectively drowned out. Although much damage has already occurred because of land mines, the problem of land mine proliferation is finally gaining the attention it deserves, as humanitarian matters are presently spilling over into the security field.

Section 2.2.3-Effects of Land Mine Use

Although the decision to use land mines is a matter of military policy, the consequences of their use have more repercussions in the civilian sector. Former UN Secretary General, Boutros Boutros-Ghali describes these repercussions in the following manner:

> These mines have been placed not only in combat zones, but also in areas of purely civilian and commercial activity, thus bringing terror to large populations. In the hinterlands and countrysides of the world, the legless, blinded, ravaged bodies of the living are an increasingly common sight. They are condemned to a future of marginal social and economic existence and place an impossible burden on nations striving for development. Mines have been planted around key economic installations, including electric plants and power lines, water treatment plants, road networks, market centres and port facilities. By neutralizing essential infrastructure, mines present a virtually insuperable obstacle to post-conflict peace-building.[138]

Even if one takes the view that these weapons are a legitimate military instrument being used incorrectly, there are still significant differences between the

[137]Interview with Tore Skedsmo.
[138]Boutros Boutros-Ghali, 8

consequences for the military and for the civilian population as a whole. For example, once mines have achieved their military aims, the soldiers who actually laid them can move on, but the inhabitants of the infected areas cannot leave; civilians must continually struggle with the hazard of land mines. Victims continue to be claimed long after the soldier who laid the mine has left. Mines are "more damaging because of the collateral effect of their continued lethal nature upon societies in infested states".[139]Moreover, at the end of most conflicts, weapons can be put away, but the physical nature of land mines makes this impossible.[140]

Those who suffer the consequences of indiscriminate land mine use live mostly in poor Third World countries already suffering from a host of other problems. The worst consequences are the death and horrific injuries land mines cause. According to the ICRC, more than 800 people are killed per month and thousands more are injured by land mines, about 26,000 casualties a year.[141] In the next five years it is estimated that 50,000 more people will be killed and another 80,000 injured.[142] The most telling medical consequence of land mine use is the abnormal high rate of amputations in countries infested with mines.[143] Tragically, the

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[139]UN, "Assistance in Mine Clearance", 3.

[140]Rae McGrath (Interview).

[141]UN, "Assistance in Mine Clearance", 2 and DOS, Hidden Killers, 1. It should be noted that Red Cross statistics are quoted frequently because most of the countries affected do not have or keep cohesive casualty records. It should also be noted that the figures quoted may be insufficient because many victims died where a mine hit them or they never made it to a hospital. Records are only kept for victims admitted to hospitals.

[142]According to UN Secretary General Boutros Boutros-Ghali as quoted in the *International Herald Tribune,* May 4-5, 1996, 2

[143]The following are mine amputation rates for these states: Angola-1 per 470 persons, Cambodia-1 per 236 persons, Somalia-1 per 1,650 persons, Mozambique-1 per 1862 persons, Uganda-1 per 1100 persons, Vietnam-1 per 2500. In contrast, the United States, a country without a land mine problem, has an amputation rate of only 1 per 22,000 people. See Dr. Robin Gray, "Humanitarian Consequences of Mine Usage", in ICRC, Montreux Symposium, 63-64 citing statistics from the

medical infrastructure required to deal with these mine traumas is simply inadequate in poorer countries. The only people likely to receive prompt medical aid are the soldiers themselves. They also tend to receive priority in follow-up care as well; in Cambodia, for example, most of the amputees who are prioritized for artificial limbs are soldiers.[144] Not only are the dangers more prevalent in heavily mined areas, but the medical response is abysmal for these types of injuries. Disabled land mine victims are relegated to a life of marginality and poverty amidst already harsh circumstances.

The activities most likely to risk mine injury include collecting firewood, farming, grazing livestock, children playing and rescuing other victims. Most of the land mine victims are civilians carrying out their daily business.[145] In certain areas, people knowingly venture into minefields because they are searching for food. Civilians take these risks because their alternatives are limited. Refugees, for example, can be repatriated to unfamiliar, mined territory and have to make do in a hostile environment. Daily subsistence depends on accessing these areas. Even where minefields are marked, people still need to enter them to go about these type of activities.

Not only do land mines impact most directly on non-combatants but they have an impact on society, the economy, and ultimately security.

Medical Educational Trust, "Indiscriminate Weapons: Landmines", London, June 1992; HRW, A Deadly Legacy, 126-127 citing figures from Africa Watch and Asia Watch (divisions of Human Rights Watch); Eric Stover and Dan Charles, "The Killing Minefields of Cambodia", New Scientist, 19 October 1991, 27.

[144] Stover and Charles, 29.

[145] ICRC, Background Document, April 1994, 53.

> The rate of return of refugees to their homes is another victim to the hidden killers, this time through the uncertainty they cause-an uncertainty which also prevents the full use of key resources such as water and agricultural land. Thus, some of the most fertile areas of Angola have had to be abandoned, while 27 percent of Libya's arable land lies unused since the Second World War. Mines have contributed to the impoverishment of many third world countries and are a serious obstacle to recovery from war, notably in Cambodia.[146]

When arable land becomes mine infested, it becomes unusable, and hence self-sufficiency in food production also decreases. This has the ripple effect of societies having to depend on outside bodies for food supplies. For example, much of the arable land in Angola has been mined and is therefore unsuitable for food production. Cambodia actually has to import 200,000 tons of rice as a direct result of its decreased production.[147] In Mozambique, the mining of roads interferes with the transport of food relief. Even shepherds and nomadic people are having a difficult time, as prime grazing land is mined, placing their already scant subsistence in jeopardy.[148]

Mine infestation is taking up precious lands and resources which will be needed even more as population demands increase and resources dwindle. David Gowdey argues:

> It is an insane situation where if we do not stop the proliferation of land mines, eventually large parts of the world will be uninhabitable. We are creating one of the largest, stupidest environmental disasters in the history of mankind, mine by mine.[149]

Mines also interfere with other essential infrastructures; the delivery of water and electricity becomes unstable and unreliable, mined roads become unusable, and local businesses deteriorate due to lack of supplies. The result is that the price of

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[146]RUSI Newsbrief, Vol. 15, No. 8, August 1995, 63.
[147] Masland and Barry, 28 and Reid, 17.
[148]UN, "Assistance in Mine Clearance", 5 and Boutros Boutros-Ghali, 8.
[149]Correspondence with David Gowdey.

goods increases, as does unemployment, and the poor become even poorer. In addition, displaced people then congregate in urban areas, overburdening those resources and adding to further economic depravation and hardship.[150] Land mines also present considerable costs to the international community. Not only are mine clearance operations extremely expensive and laborious, but the cost in international humanitarian aid to heavily mined communities is also enormous.

[150]Boutros Boutros-Ghali, 8.

Section 2.3 Threat Comparison

> Another important avenue to pursue is placing mines in the same legal and ethical category as chemical and biological weapons in order to stigmatize them in the public imagination. The use of mines is so common that for those unfamiliar with their effects they may not evoke the horrific visions of chemical or biological warfare. Were their effects better known, land mines would undoubtedly shock the conscience of mankind-the same public reaction that led to the banning of chemical and biological weapons.[151]

To the casual observer, any similarities between the threat represented by chemical weapons and land mines might seem unlikely. It would seem almost a David and Goliath comparison. In reality, however, the threat these two weapon systems pose to international security and humankind are not dissimilar. In fact, the threat from chemical weapons may be overstated while the one for land mines has been understated. This section will provide a brief overview of the similarities of and differences between these two weapon systems. This is important in understanding the true rather than the perceived nature of the threat which these weapons pose, both in the humanitarian and security context.

There are far more sophisticated, precise, and damaging weapons systems (smart ordnance) available than chemical weapons and land mines.[152] The underlying technology of both these weapons has remained almost constant for decades. Both are used as force multipliers, designed to enhance the effectiveness of other weapons systems and strategies. Chemical weapons can delay opposing forces by forcing them to don protective gear and later having to decontaminate. Land mines can also cause opposing forces to slow their movements, either by making them

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[151] Boutros Boutros-Ghali, 13.

[152] While chemical weapons can be replaced by more precise and destructive weapons to achieve better results, it would be difficult to replace one of the fundamental uses of land mines; namely to

proceed with extreme caution through mined areas or avoiding them altogether. Chemical weapons and land mines can also threaten the forces which deployed them; atmospheric conditions can blow chemical agents back on to their own forces. Likewise, troops sometimes have to retreat through the mines they have laid. Both weapons are also strictly anti-personnel in nature; they do not destroy objects or infrastructure, but are designed specifically to injure or kill human beings. The fundamental difference is that special clothing and masks can be worn to protect against deadly chemicals, but no amount of clothing can protect victims of land mines. Both weapons can contaminate the environment or infrastructure as well; but whereas decontamination and protective measures can be taken against chemical weapons, land mine pollution is of indefinite duration and no protective measures can be taken against a land mine offensive.

Both weapons are also indiscriminate, as they cannot distinguish between combatants and non-combatants.[153] The classification of land mines as intrinsically indiscriminate, however, is a controversial matter. Those who oppose land mines being categorized as indiscriminate weapons point out that it is land mine misuse that is indiscriminate rather than the properties of the weapon itself. The effects of a chemical weapons dispersal are intentional and therefore attributable directly to the weapon itself.

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protect borders in conflict areas. Until alternatives are found to protect border areas, militaries may remain attached to land mines for this reason.

[153] While chemical weapons can be aimed at enemy forces generally, the uncertainty of the dispersion techniques, such as varying atmospheric or geographic conditions, could easily contaminate more than the target area. In the case of land mines, it is more a case of temporal, indiscriminate use. Land mines meant to target soldiers remain in the ground long after the soldiers have left, and for years continue to claim victims caught in their wake. Also, minefields are quite often unmarked, and both combatants and non-combatants must face their hazards.

Can both these weapons be considered to be excessively injurious and the source of unnecessary suffering, and therefore be classified as inhumane? As SIPRI points out:

> The term humane is applied to weapons, not to the context or outcome of their use, despite the fact that the weapons under consideration—generally irritant or incapacitant weapons—can usually be used with humane or inhumane results, according to what other weapons are used in follow-up, how they are used, the temper of the conflict, and so on.[154]

It is with some irony that the treaty restricting the use of land mines is entitled the "Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects". This misleading and capricious title belies the fact that military planners have been extremely reluctant to classify land mines as excessively injurious or indiscriminate, and therefore an inhumane weapon. In contrast, chemical weapons for the most part have always been perceived as inhumane unless it was expedient or convenient not to do so. The effects of chemical weapons on a human being are horrendous but some observers would say they are not the worst imaginable. Anthony Cordesman offers the following insight on the effects of both chemical and conventional weapons.

> To begin with, it is important to understand that regardless of how horrifying chemical weapons may seem to those who have never engaged in war, the more effective chemical weapons are far more merciful than untreated or badly treated fragmentation and body cavity wounds from small arms....Cavity wounds are usually slow, hideous killers.[155]

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[154] Stockholm International Peace Research Institute, The Problem of Chemical and Biological Warfare, Vol. V, The Prevention of CBW, (Almqvist & Wiksell: Stockholm, 1971), 135.
[155] Anthony Cordesman, op. cit., in Roberts, (ed.), (1994), 35.

Land mines elicited calls for prohibitions only when civilians began to fall victim to these weapons on a massive scale; previously, soldiers had to take their chances with these weapons. The special odium attached to chemical weapons originated with a military dislike of these weapons. Had land mines been the subject of such military disfavour, it might have been easier to classify them as inhumane weapons. Part of the reason for the military dislike of chemical weapons was their utility as a psychological or terror weapon. The fact that chemical weapons are an unseen and silent killer that cannot be faced squarely makes them insidious and treacherous; the fear of a chemical attack can be very debilitating psychologically to both combatants and civilians. On the surface, it would not appear that land mines are an instrument of psychological warfare. When one looks beneath the surface, however (both figuratively and literally), the fear of not knowing whether one's next step will be on to a land mine, and therefore one's last, can instil psychological terror as well. David Hackworth points out that:

> Even soldiers who escape from a minefield unscathed are haunted by the experience. Many cases of posttraumatic stress disorder, a serious psychological malady, were caused by the preying fear of mines and booby traps. Years later, a walk across an open field brings back the old dread: What's under those leaves? Do I dare put my foot on that freshly turned earth? Walk through a minefield, and you'll never be young again.[156]

In terms of frequency of use and perceived utility, there are some substantial differences between these two weapon systems. With the exception of the First World War, and more recently but to a lesser degree the Iran-Iraq War, chemical weapons have been used very rarely in any conflicts. When they have been utilized, it usually has been against those who could not defend themselves or retaliate in kind. In contrast, land mines have been used with much more

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[156] David Hackworth, "One Weapon We Don't Need", Newsweek, April 8, 1996, 29.

frequency and intensity, and have emerged as the weapon of choice in numerous low-intensity conflicts around the world. As noted earlier, mines are a cheap and plentiful weapon, and have been used as a terror weapon against civilians in many of these conflicts. Chemical weapons are considered strategic weapons, yet have been used very rarely in that context. Most of the major powers held on to chemical weapons stockpiles for deterrent purposes, but ultimately concluded that they were obsolete[157] as a method of warfare, and that more advanced weapons were at their disposal to achieve their security goals. Land mines, on the other hand, were never considered to be a strategic weapon system. They will not alter the balance of power or decide the outcome of a war. To date, chemical weapons have not altered strategic stability, either. What is perhaps erroneous in these perceptions is the notion of what constitutes security. Kenneth Anderson argues that:

> International wars have rarely (if ever) been caused by landmines, and so anti-personnel landmines have not received attention from the "security" as distinguished from the "humanitarian" perspective. The fact that the international community is now willing to intervene in places like Somalia, where no small part of the breakdown of society and starvation is due to such "non-destabilizing weapons" as small arms and landmines should cause the international community to rethink weapons and stability.[158]

Simply because security definitions are changing does not necessarily mean that land mines should be reclassified as a strategic weapon or a weapon of mass destruction. Perhaps chemical weapons should be downgraded from its status as a

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[157]There are some members within the military establishment who would argue that chemical weapons do retain some military utility as a force multiplier; during an offensive manoeuvre, chemical weapons could be used to slow down and confuse the forces of the opposition. The likelihood of these weapons ever being used for these purposes is remote if not nil, as the first use of chemical weapons is prohibited by the Geneva Protocol of 1925. There is also a tremendous stigma against the use of these weapons. Therefore, if a weapon is unlikely to ever be used, and has no deterrent effect, it becomes obsolete as a method of warfare.

[158]Kenneth Anderson, "Overview of the Problem of Anti-Personnel Mines", in ICRC, Montreux Symposium, 14.

weapon of mass destruction, but is unlikely that such a perceptual change will occur in the near future. A more accurate description of land mines is a "theater-wide weapon of mass civilian destruction''. Land mines are not a strategic weapon, but they are destabilizing to security in the widest sense.

Both weapons seem more of a threat in Third World regions than in developed ones. Although in terms of weapons categorization land mines and chemical weapons are on the opposite ends of various continuums, they both hold a certain promise to weaker states and other actors. Chemical weapons are often labelled "the poor man's nuclear weapon" and land mines have been called "the weapon of the weak". While the military utility of chemical weapons has been downgraded by the major powers, weaker states seek to acquire them as the next best thing to nuclear weapons. Similarly, while there are numerous sophisticated conventional weapons available, land mines have become the cheaper, alternative weapons system in numerous low- intensity conflicts. If one can draw the analogy that chemical weapons are a step down from extremely destructive and efficient strategic weapons like nuclear weapons, then the same standard of reasoning could be applied to land mines and more advanced conventional weapons. Jim Wurst describes the role of land mines in the Post-Cold War world:

> If the horrific effects of land mines do begin to penetrate the public mind, these weapons may become symbols of the cruelty and chaos of the Post-Cold War World just as the superpowers' nuclear arsenals symbolized the Cold War. Instead of high tech tools of massive death in the hands of the planet's elite, the land mine is available to all and it is user-friendly. And, as always, the victim are poor and helpless, picked off by these internal sentries, one by one, and limb by limb.[159]

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[159] Jim Wurst, "Ten Million Tragedies, One Step at a Time", Bulletin of the Atomic Scientist, July/August 1993, 21.

Both these weapons can also present a terrorist threat. The Tokyo subway Sarin gas attack sent shock-waves throughout the international community. For years, there was discussion about the potential threat of a terrorist attack with chemical, biological or even nuclear weapons. Tokyo made that threat real, and since that time the threat of chemical terrorism has become the new international bogeyman. The chemical attack in Tokyo took relatively few casualties in comparison to other terrorist incidents. In contrast, while land mines are considered a weapon of terror, they generally are not referred to as a terrorist weapon. From a different perspective, however, land mines can be considered small bombs which indiscriminately claim their victims. As George Reid states, "...it is the blind terrorism caused by anti-personnel mines which won't leave my mind."[160] In the traditional way of thinking about and discussing terrorism, these weapons would be considered a serious threat. It should be stressed, however, that a terrorist attack with chemical weapons could bring even worse destruction, especially against unprepared civilian centres.

To date, land mines have proliferated more rapidly, and have been responsible for more carnage and destruction than chemical weapons. If chemical weapons were responsible for the deaths of 800 people a month and thousands of casualties, their threat would be considered extremely dangerous. While chemical weapons were responsible for 100,000 deaths and one million injuries during World War I, these casualties were on the battlefield; for the most part civilians have not been subject to mass casualties and this scale of casualties has not been repeated. The fundamental difference between land mines and chemical weapons is that it is the

[160] George Reid, "No Halt Sign for Massacres in Slow Motion", *The Scotsman*, 18 April 1996, 17.

potential of what chemical weapons could do that is considered a major threat to security, rather than what they have actually done to date. If chemical weapons were to be used with ballistic missile technology against major population centres in areas of conflict, then they could pose a significant threat to local balances of power. This frightening scenario has yet to occur, but with rogue states seeking to acquire chemical weapons the possibility looms.

Chemical weapons present more of a threat to urban elites (therefore, the weapon is seen as more of a threat) and thus create a more visceral terror. Mine victims are usually hapless rural inhabitants (and in 'unimportant' countries)—removed from policy imagination and thereby discounted. Therefore, the threat assessment can be said to be self-serving. In the present security environment, however, it is the collateral damage of land mines that has most affected the stability of particular states and their ability to recover from conflict. On balance, the threat from land mines is ongoing and devastating while the one from chemical weapons is more feared than realized. Both weapons will continue to threaten the weak or the unprotected.

Chapter III

Collective Restraints

A variety of measures are available to states beyond formal arms control treaties for curtailing the proliferation of weapons: these include freezes on the production, use and transfer of weapons; the renunciation of particular weapons; bilateral agreements on weapons reductions or destruction; and non-proliferation regimes or supplier cartels that seek to restrict access to the supply of dual-use technology or destabilizing weapons. These approaches are more useful when they are orchestrated on an international scale, as the diffusion of weaponry is world-wide and co-operation between states is the most crucial element in making these restraints effective. Most of these measures rely on informal agreements or declarations rather than on rigid treaty obligations. Some of these agreements may be problematic as they can be vague, non-verifiable, and unenforceable; merely declarative approaches to weapons controls are rarely substantial enough. Nonetheless, these approaches have the political and practical advantage of allowing states to expedite the co-operative process rather than being slowed down by formal agreements that are often difficult to negotiate and even harder to obtain. This chapter will examine the variety of options available to states in restraining weapons or technology, or both, short of adopting a multilateral treaty completely prohibiting them.

Section 3.1-Supplier Control Regimes

Supplier cartels are designed to monitor and restrict access to the tools and means that may produce undesirable weapons. Problems of cheating and verification can make a specific weapon by itself very difficult to control; it is notoriously difficult to keep track of light or small weapons such as land mines, let alone control access to them. Dual-use technology; that is, technology with both civil and military applications, can also complicate non-proliferation efforts.[1] As technology has also been diffused in an interdependent world, it can be very difficult to control. The major problem that supplier cartels and export control mechanisms seek to address is how to prevent sensitive technology from falling into the hands of irresponsible or rogue states without infringing upon opportunities for free trade and technological development. This also creates an uneasy balance between security concerns and economic development. Controls of this nature may impede the supply of these weapons in the short term, but they cannot effectively limit the demand for them.

Whether party to a multilateral arrangement or not, most states do have some system of export controls in place, and in more recent years have sought to revamp them.[2] Supplier cartels rely upon national export controls for implementation.

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[1] The agents used to make chemical weapons are a classic case of dual-use technology. Some chemicals having legitimate functions for industry can also be used to make weapons, either alone or in combination with other agents. In contrast, land mines only have a singular use; they are a complete weapon in their own right.

[2] For a detailed discussion of various countries' export control policies please see the following: Ian Anthony, (ed.), Arms Export Regulation, (London: Oxford University Press, 1991); SIPRI Yearbook 1993, World Armaments and Disarmament, (Oxford: Oxford University Press, 1993).

Multilateral controls will not work without domestic support, and unilateral controls by themselves are hardly enough. Weak export controls can facilitate easier access to various technologies and weapons for rogue states or other actors determined to acquire them. But even strong export controls can be ineffective against proliferation if there is no form of co-ordination with other supplier states. In other words, the spectre of the arms dealer becomes all too real. If country A cannot sell arms to country B, then country C definitely will. There may also be disagreement among certain states as to which states should or should not benefit from the export of a particular technology or weapon. For example:

> While the Allied governments agree in principle on maintaining national security controls, most have disagreed with elements of U.S. policy. Most have preferred less extensive national security and have opposed the use of export controls for foreign policy purposes. The extraterritorial application of U.S. controls—the extension of U.S. controls to foreign subsidiaries of U.S. firms and foreign firms that use U.S. technology—has also been a divisive issue between the United States and its allies.[3]

What is in the national security interest of one state may not be in the interest of another. Therefore, supplier cartels, or control regimes, are important to non-proliferation efforts as they seek to find a common ground in co-ordinating weapon control policies.

A variety of export control regimes are available to restrict the diffusion of technology and weapons. Although this study is concerned with the regimes pertaining to chemical weapons and land mines, a brief look at some of the other

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For a look at the policies of the European Union countries, see the SAFERWORLD Report, Regulating Arms Exports: A Programme for the European Community, September 1991. For a discussion of the various policies relating to export controls on particular countries, see Hans G. Brauch, H. J. Van Der Graaf, John Grin and Wim A. Smit (eds.), Controlling the Development and Spread of Military Technology, (Amsterdam: VU University Press, 1992), Chapters 16, 18, 19. For a discussion of U.S. export controls see Glennon Harrison and George Holliday, "Export Controls", CRS Issue Brief, Congressional Research Service, updated April 30, 1993, Washington.

supplier regimes is in order. The oldest and most well known multilateral export control supply regime was the Co-ordinating Committee for Multilateral Export Controls, or COCOM as it was more commonly known.[4] COCOM was established in 1949 at the commencement of the Cold War "...principally in order to prevent and/or delay the acquisition of militarily relevant Western technology by the communist states."[5] The COCOM regime was based upon common or international control lists on particular items.[6] All members pledged to co-operate with each other regarding common criteria for export controls, and any exceptions to these controls had to be approved by the unanimous decision of all its members.[7]

With the end of the Cold War and an altered international security environment, the very *raison d'être* of COCOM was called into question. It is widely believed that the successor regime, "The Wassenaar Arrangement", (originally the "New Forum") will shift the focus from a traditional East-West context to what is

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[3]Harrison and Holliday, 2.

[4] COCOM was technically dissolved in March of 1994, and it was thought that the new group, initially called the "New Forum" and now "The Wassenaar Arrangement" would be operational by October 1994, then January 1995; implementation is now set to begin in 1996. Until the new organization is up and running, most states are still operating under the old COCOM controls during the interim period. See Paul Eavis and Oliver Sprague, "Conventional Weapons Proliferation and Control", in Deltac Limited and Saferworld, Proliferation and Export Controls An Analysis of Sensitive Technologies and Countries of Concern, (Great Britain: Deltac/Saferworld, 1995), 92-93 and Sarah Walkling, "Post COCOM 'Wassenaar Arrangement' Set to Begin New Export Control Role", Arms Control Today, December 1995/January 1996, 24.

[5]Peter Van Ham, Managing Non-Proliferation Regimes in the 1990s Power, Politics, and Policies, The Royal Institute for International Affairs, (New York: Council on Foreign Relations Press, 1994), 3-4.

[6] These control lists were divided into three separate categories: The International Industrial List covered commodities or data, which have both civilian and military applications; the International Atomic Energy List controlled the sale of items related to atomic energy; and the International Munitions List controlled items which only have military application. See Ian Anthony, "The Co-ordinating Committee on Export Controls", in Anthony, (ed.), op. cit., 209. The Industrial List was updated quite frequently due to the ever changing nature of technology. See Paul Rusman, "A Conventional Arms Transfer Regime in the EC", in Brauch, et al., 272.

perceived as more relevant in supply regimes—a North-South focus. The successor to COCOM must operate in an environment where technology and knowledge are no longer the privilege of only a few states. Moreover, the members of the regime are no longer as united as they once were against a common enemy.

> At the final COCOM meeting, it was agreed that the New Forum would focus on conventional arms and equipment and related dual-use goods, and would complement the other existing supplier regimes that aim to limit the spread of weapons of mass destruction and missiles (MTCR, NSG, Australia Group). Moreover, it was becoming clear that the New Forum would have two main pillars: one dealing with dual technologies relating to advanced conventional arms, and the others concerned with the exports of conventional arms and military equipment[8]

Like COCOM, the Wassenaar Arrangement will still contain "two COCOM era control schedules: the international industrial list of civilian use technology and the industrial military list of conventional weapons and dual-use technology."[9] Although the structures of these lists will remain similar it is likely they will be revised and shortened. The Wassenaar Arrangement will be much less stringent than COCOM. In the Post-Cold War world there must be a balance between proliferation concerns and the right of access to technology. According to Lynn Davis, the U.S. Under-Secretary of State, this new regime "would not attempt to match the old, ideologically driven mechanism for stopping Western exports to a clearly delineated bloc of Communist States. It isn't going to be that good."[10]

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[7]As COCOM operated by consensus, one member would be able to block a transfer or sale, using a 'de facto veto', See Anthony, (ed.), op. cit., 209.

[8]Owen Greene, Developing an Effective Successor to COCOM, Saferworld Briefing, September 1995, 7.

[9] Sarah Walkling, "Russia Ready to Join New Post-COCOM Organization", Arms Control Today, September 1995, 31.

[10]R. Jeffrey Smith, "Military Export Controls Will be Loosened", *International Herald Tribune*, 21 September 1995, 10.

An increasing security concern in the Post-Cold War world is that the most destructive weapons are proliferating at high rates, especially in areas of high tension or conflict where certain states may not hesitate to use these weapons. Politically, however, it is a sensitive issue to actually name a proscribed state in the controls, as there may be fears of a terrorist backlash or of losing future trading or even political partners. A compromise solution may be found in singling out regions of concern instead.[11] In effect, states could still single out specific states without doing so officially. Unlike COCOM rules which provide a right of veto,[12] member states can no longer intervene in the export or sales decision of another member state. The issue of advanced notification of an impending sale has remained a sticking point for the Group.[13] A compromise solution was found in requiring notification of a sale 30-60 days after the licence has been granted to a non-member if the transfer had been denied by another member in the past three years.[14]

This Wassenaar Arrangement will be more inclusive and less restrictive than the old COCOM regime. It addresses relevant non-proliferation issues in the Post-Cold War security environment and seeks to fill the gaps between other supplier control regimes. The fact that the Wassenaar Arrangement has no mandatory controls may weaken its implementation and hence its effectiveness. More

[11] See Walkling, op. cit., (September 1995). 31-33. At the December 1995 meeting of the Wassenaar Arrangement it was agreed that specific states would not be targeted but the regime would "...work to prevent destabilizing accumulations of conventional weapons and transfer of arms and sensitive technologies 'for military 'end-uses' in so-called 'rogue states'. See Walkling, op. cit., December/January 1996, 24.
[12]Walkling, op. cit., September 1995, 31.
[13]Walkling, op. cit., Dec/Jan 1996, 24

pointedly, an important supplier such as China remains outside the regime. Until all the major suppliers are in sync, the regime will have considerable weaknesses. But this regime still serves as a useful mechanism for curtailing the weapons trade.

After COCOM, the next oldest of the supplier groups is the Nuclear Suppliers Group, (NSG). The NSG was established by a group of countries who came together in 1976 to establish "common guidelines about regulating and 'exercising restraint' in the export of sensitive reprocessing, enrichment and heavy water production facilities."[15] This was in response to the realization that there were many loopholes allowing for the diversion of nuclear materials in the nuclear non-proliferation regime.[16] The Guidelines seek to prevent any export of nuclear material from being used or diverted for weapons use.[17] The Guidelines were rather vague, and implementation was considered lacklustre by some of the members.[18] The Guidelines were not updated until April of 1992 when the Nuclear Suppliers Guidelines Part II on the transfers of nuclear dual-use equipment, material, related technology and a list detailing 65 dual-use items were

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[14] Previously, the Russian government had held out for the notification of regime members 30-60 days after the item in question had been shipped. See Sarah Walkling, "Wassenaar Members Resolve Most Differences During July Plenary", Arms Control Today, July 1996, 23.

[15] The founding members of the NSG were the United States, the United Kingdom, the Soviet Union, Japan, Canada, West Germany, and France. Owen Greene, Successor to COCOM Regime: Options and Dilemmas, Saferworld Briefing, March 1994, 4.

[16] The explosion of a nuclear device by India in 1974 was a wake-up call announcing that the nuclear non-proliferation regime was not as strong as it should be. IAEA safeguards "applied only to exported materials and equipment and not to all nuclear activities of recipient countries". See Van Ham, op. cit., 15.

[17] The guidelines advocate restraint in any transfer of facilities or technology that could be diverted for uranium enrichment, reprocessing and heavy water production; the protection of nuclear materials and facilities; restrictions on the retransfer of exported items; and finally acceptance of the Zangger Committee Control List. See Roland Timerbaev and Lisa Moskowitz, (comps.), Monterey Institute for International Studies, Inventory of International Non-Proliferation Organizations and Regimes, Program for Non-Proliferation Studies, 1994 ed., 12. The Zangger Committee Control List was a "trigger list" of special fissionable materials and equipment designed for the processing, use, and production of fissionable materials that are subject to IAEA safeguards.

introduced.[19] Members also pledged to export materials and facilities under full IAEA safeguards.[20]

The Missile Technology Control Regime (The MTCR) was established in 1987 in response to the proliferation of missile production. The MTCR was meant to enhance current nuclear non-proliferation policy "...by controlling transfers that could make a contribution of nuclear weapons deliveries other than manned aircraft."[21] It was also hoped that the regime would discourage the proliferation of delivery systems for other Weapons of Mass Destruction such as chemical weapons. Not only were states in volatile regions seeking to acquire chemical weapons but they also were pursuing the missile technology to deliver them. The MTCR has established a set of export control guidelines which operate according to two separate categories of common control lists.[22] Because the MTCR is an informal agreement, it has no enforcement or verification provisions. A state must persuade another state to drop a sale through diplomacy, or impose unilateral sanctions if the response is negative.[23]

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[18] Greene, op. cit., March 1994, 4.
[19] Timerbaev and Moskowitz, 12.
[20] Ibid.
[21] Robert Shuey, "Assessment of the Missile Technology Control Regime", in Brauch, et al.
[22] Category I includes materials used specifically for developing and producing missiles and sub-components. Category II materials are basically dual-use components which may have civilian applications or be applied to burgeoning space programmes.
[23] For example, a major dispute between Russia and the United States erupted over the former's proposed sale in 1992 of rocket stage technology to India. The Clinton administration was able to secure a partial cancellation of the sale. The Russians claimed the sale would be for peaceful purposes, but the Americans saw the motivations of India as more sinister. The U.S. in turn imposed sanctions to include a two-year ban on imports and exports on U.S. government contracts with Glavkosmos and ISRO. In 1993, in talks between the two parties, the U.S. threatened additional sanctions not only against the two aforementioned Russian companies but other Russian firms as well. By July of 1993, however, compromise had been found. Under a Memorandum of Understanding on missile technology, the Russians were permitted to deliver the rocket stage, but restrictions were placed on the accompanying transfer of production facilities and technology so that India could not easily reproduce the rocket stage. In return, the U.S. dropped sanctions and Russia agreed to abide by the terms of the MTCR. See Charles Peterson, "Moscow, Washington,

All these supplier groups are important to non-proliferation efforts and they are meant to fill any gaps in the proliferation pathways so that destructive weapons or component technologies do not fall into the wrong hands. Although they all are a product of international co-operation, they rely upon national laws and controls for implementation; the tenacity of enforcement or even application can vary from state to state. Economic and security interests are not always compatible between states, and as Peter Van Ham argues:

> The somewhat hazy nature of many non-proliferation agreements indicates that Western supplier cartels already find it very difficult to agree upon a control list which is acceptable to all states concerned. Intensive bargaining takes place during the regular revisions of the control lists, since this has obviously has significant consequences for the export opportunities of the members' high-technology and defence related industries.[24]

If important suppliers are left outside the regimes, then would-be proliferants can always go to other suppliers. There may be cries of discrimination from states left outside these regimes that they are being denied access to economic development. Most important, regimes cannot eliminate these weapons, or the technologies to make them—they can only impede their acquisition. These inherent difficulties notwithstanding, supplier regimes reflect a commonality of purpose among states professing common non-proliferation goals.

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and the Missile Technology Control Regime", Contemporary Security Policy, Vol. 16, No. 2, August 1995, for a detailed description of U.S. and Russian interpretations of the MTCR.

[24]Van Ham, 41.

Section 3.1.1-The Australia Group

The chemical industry is very extensive which makes it difficult to monitor the diversion of chemical agents to chemical weapons production. In addition, many technologies used for making chemical weapons are substitutable. If one specific component is banned, then with appropriate technical knowledge, it can be replaced by another agent.[25] Many Western nations had supplied the equipment and materials to build chemical weapons facilities in today's areas of concern; this occurred through a combination of sloppy export controls, connivance, and clandestine means.[26] The use of chemical weapons in the Iran-Iraq War in the mid-1980s raised additional security concerns about the proliferation of these weapons. In 1985, negotiations on the projected CWC appeared hopelessly bogged

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[25]For example, thionyl chloride is used as a chlorinating agent in making methylphosphonyl dichloride, which is necessary for nerve gas. It can be replaced by phosgene or sulphuryl chloride, which are not on control lists. See J. P. Robinson, "The supply side control of the spread of chemical weapons" in Jean François Rioux (ed.), Limiting the Proliferation of Weapons, (Ottawa: Carleton University Press, 1992), 68. Another example of a substitutable chemical agent is the nerve gas tabun, which is composed of four major chemicals: sodium cyanide, ethanol, dimethylamine and phosphorous oxychloride. Further complicating matters, these agents are also produced by numerous other countries outside the control regimes. Only dimethylamine and phosphorous oxychloride are under international controls and both are also used in many legitimate chemical industry processes. As a result, these chemical can be imported separately for legitimate reasons and then diverted for illicit use. See Kathleen Bailey, "Problems with a Chemical Weapons Ban" in Orbis, Spring 1992, 239-240.

[26]Some examples of Western aid in chemical weapons development are the following: Bayer AG, of Germany was the major equipment supplier for an Iranian pesticides plant in 1987-88 and was raided by German prosecutors in 1989; Tecnimont of Italy was involved in engineering and construction work at the Iranian Tabriz ethylene base complex. Ethylene has legitimate civilian applications but can also be used as a mustard gas precursor; John Brown Engineering in the Netherlands was approached by the Iranian government in 1987 to build a phosphorous pentasulfide factory but the project was blocked by Dutch government and U.S. government pressure; MW Kellog in the United Kingdom was contracted to build a $400 million urea and ammonia plant in the Khorasan province in Iran of which the feedstock has direct application to chemical weapons manufacturing; the Aldrich corporation in the U.SA. has made several attempts to ship chemical weapons precursors such as phosphorous pentachloride to the Atomic Research Organization of Iran. These items represent only a fraction of the types of deals and methods in which materials, equipment, and knowledge has been diverted to chemical weapons programmes. One of the major problems with abating chemical weapons proliferation is trying to discern the military applications from the complexities of civilian development. For a complete list, see the

down and it did not seem that a finalized CWC would be imminent. Accordingly, it seemed more practical to pursue a different but complementary avenue to at least try to decelerate the proliferation of the materials and technology needed to make chemical weapons. It was also important for different states to co-ordinate their non-proliferation policies, as "one glaring weakness in the early national non-proliferation efforts was that countries tended to include different chemicals in their export control lists."[27]

In 1985, several supplier states agreed to meet and try to co-ordinate policies, and under the auspices of the Australian Embassy in Paris, the "Australia Group" was established. Currently the Australia Group is made up of 28 member states including most of the Western industrialized states as well as the European Union. New membership applications are considered on an individual basis.[28] The purpose of the Australia Group is to reduce the availability of potential dual-use technology to states that are suspected of pursuing an offensive, clandestine, or hostile chemical weapons programme.[29] To achieve these goals, the Group is trying to find the right balance between encouraging technological development and restricting the military applications of such materials and technology through the harmonization of export control measures. As one of the integral foundations

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Simon Wiesenthal Center Special Report from Middle East Defense News (MedNews), Weapons of Mass Destruction, The Cases of Iran, Syria and Libya, Los Angeles: August 1992, 114-129.

[27]Aspen Strategy Group, New Threats, Responding to the Proliferation of Nuclear, Chemical, and Delivery Capabilities in the Third World, (Lanham: University Press of America, 1990), 78.

[28]Charles Flowerree, Controlling Chemical and Biological Weapons and Arms Control" in Richard Dean Burns, (ed.), Encyclopedia of Arms Control and Disarmament, (New York: Charles Scribner's Sons, 1993), 1014.

[29]While all weapons development programmes can be considered hostile, if a state is building up a weapons production capability clandestinely, and in contravention of international norms, then it is reasonable to assume that it might also use these weapons irresponsibly or offensively. An opposing viewpoint would argue that it is discriminatory to deny access to materials that one already possesses so that another state cannot acquire the same weapons capability.

of counter-proliferation is good intelligence, information sharing is crucial to the work of the Australia Group. Technical, political, and military intelligence is circulated among members, although due to the rather sensitive nature of the information involved, details are kept rather quiet.[30] Information sharing focuses on three main issues: "(1) the strategic nature of sensitive items; (2) the procurement policies of threshold countries; and (3) export policies of supplier states."[31]

The Australia Group seeks to restrict access not only to dual-use chemicals but also to chemical weapons production equipment and related technology and manufacturing facilities, as well as to micro-organisms, toxins and equipment used in biological weapons programmes.[32] From the onset of the Australia Group's activities in 1985 there was a great deal of development and enlargement of the lists of chemical agents placed under controls. In 1985 there was only a core list of five precursor chemicals agreed upon among the member states. Governments were required to place export controls on these particular items. Being developed in tandem with the core lists were warning lists of dual-use chemicals and chemical weapons equipment which were distributed to industry to alert them to any suspicious activities that might be used to make chemical weapons. By 1992, the list of export controls had been expanded to 54 chemical precursors.[33]

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[30]Brauch, et al.,16.

[31]Van Ham, 41.

[32]It was felt that it would be in the best interest of such a supplier regime to include controls which prevented the acquisition of biological agents, and thus export controls were also established for certain microorganisms, toxins and equipment. For a list of these controls please see ACDA Chemical and Biological Weapons Reader, February 1995, 19-24.

[33]See ACDA Factsheet, "Australia Group", February 10,1995, 1, for a discussion of the evolution of Australia Group's export control lists. For a list of the actual 54 precursor chemicals and their role as chemical weapons agents see ACDA Factsheet, "Australia Group Export Controls on

Having a dual-track approach to restricting chemical agents was a deliberate and expedient tactic. Since it would be very difficult to impose formal controls on all these chemical agents, it was thought more crucial and realistic to impose mandatory controls on the more dangerous agents first, and then deal with the less obvious proliferation pathways in a more co-operative manner. Having agents placed on a warning list instead of a core list also seemed more palatable to countries that were more hesitant in their regulation of their chemical industries. As a further precaution, there is always the option of upgrading a warning-list chemical to core-list status if it became apparent that the chemical agent in question is being used for more illicit activities.[34] Once the original lists were accepted, there was a move to transfer many items on the warning list to the core list to be absolutely sure that all proliferation pathways were covered. In the wake of the Gulf War, Australia Group members pledged to enact export licence requirements for the original warning list chemicals as well (except for those exported to other Australia Group members), effectively making the two lists one.[35]

The Australia Group has both strengths and weaknesses. Its lack of institutionalization can be viewed as a lack of cohesiveness and commitment. A supplier regime that has no enforcement mechanisms and depends upon the goodwill and co-operation of the participants for its success is inherently weak. Part of the problem is that the common goals of non-proliferation have to

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Materials Used in the Manufacture of Chemical and Biological Weapons. Control List of Dual-Use Chemicals: Commercial and Military Application", February 10, 1995.

compete with the realist perspective of a state's self-interest. The state's self-interest may or may not be in the common interest. Conversely, it can be argued that it is the very loose structure of the Australia Group which makes it easier for the participants to reach agreement. According to Peter Van Ham, "This bargaining process would probably be inhibited by further institutionalization, and by converting these rather loosely structured gentlemen's agreements into formal treaties."[36] Sometimes more can be accomplished in an informal and less pressured environment than in an overly bureaucratic process or structure. Although the size of the Australia Group makes it exclusive, it also enables it to be more pragmatic. As the Australia Group's membership is composed of states from similar backgrounds, members were able to reach agreements and solve disagreements among themselves faster than if there was a larger or more diverse membership. Still, if more states have a commonality of policy regarding chemical weapons, then it is more likely that the actual supply of weapons materials can be reduced. Elisa Harris points out that:

> Additional efforts will, however, be required if the export controls maintained by countries outside the Australia Group, such as India, are to be harmonized with those of the Group. Ultimately, consideration will have to be given to expanding the actual membership of the Group to include non-OECD members.[37]

The most obvious criticism of the Australia Group is that it does not prevent chemical weapons technology and knowledge from spreading, but merely retards its progress. Most governments are willing to acknowledge the limitations of the Australia Group on this point, but common sense would dictate that some

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[34] Robinson, op. cit., in Brauch, et al., 161-162.
[35] Ibid., 164 and Van Ham, 30.
[36] Van Ham, 41.
[37] Elisa Harris, "Towards a Comprehensive Strategy for Halting Chemical and Biological Weapons Production Proliferation", Arms Control, Vol. 12, No. 2, September 1991, 133.

counter-proliferation measures are better than none at all. For example, the U.S. Arms Control and Disarmament Agency (ACDA) has stated that:

> We believe the Group's efforts have made it more costly and more difficult for would-be proliferants to obtain inputs to a CW production capability. Continuation and expansion of these efforts hold promise for retarding and discouraging CW acquisition until a global CW ban is completed.[38]

The Australia Group is acknowledged to be an intermediary or stop-gap measure and not a permanent solution to the problem of chemical weapons proliferation.

Another problem with the Australia Group is that those states who remain outside the regime may have a chemical industry, and can produce their own chemical weapons or indeed trade with whomever they choose.[39] Would-be proliferants have this latitude because the materials and knowledge for building chemical weapons are not highly complex as compared to nuclear weapons, for example. The technological wherewithal and materials needed to make chemical weapons are already wide-spread. No one state or group has a monopoly on the ability to manufacture chemical weapons; therefore, a supplier regime may slow proliferation pathways, but it cannot contain them.[40]

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[38]Brauch, et al., 167-168, quoting a reference to ACDA-Arms Control and Disarmament Agency and Department of State 1990. 'Written responses for the record to questions submitted from the House Foreign Affairs Subcommittee on Arms Control, International Security and Science after a hearing on 11 July', *Proliferation and Arms Control*, 274.

[39]For example, major producers like China, India, Mexico, Romania, South Africa and South Korea are not members of the regimes. See Van Ham, 30. But while certain states are not official members, they do show a commitment to co-operative security and to the aims of the Australia Group by imposing export controls on chemical and biological agents. Poland, Hungary, Czechoslovakia, Romania, Bulgaria and Israel have all agreed to follow these controls. See Janne Nolan, (ed.), Global Engagement, (Washington: The Brookings Institution, 1994), 51. In addition, the Australia Group does expand its membership, although not much is known about this process. For example, Finland and Sweden were granted membership at a December 1991 meeting of the Group; at a June 1992 meeting, membership applications were considered from Argentina, Czechoslovakia, Hungary, and Poland. Thus, while there is outside suspicion of the regime, there is also outside interest in its work. See SIPRI Yearbook 1993, 268-269.

[40] The knowledge, technology, and materials to manufacture chemical weapons are easier to obtain than nuclear weapons. Moreover, these capabilities are no longer in the hands of the few. In

A control regime is designed to reduce the opportunities for a determined proliferant to gain access to weapons-making materials. This is usually accomplished by tightening and monitoring legitimate channels of trade or instituting specific trade barriers. It is much more difficult for a control regime to monitor the illicit trade in chemical weapons materials that circumvent trade barriers. According to William Webster:

> They [proliferating countries] are using front companies, falsification of export documents, and multiple transshipment points. We are also finding that regulations are being circumvented by ordering material or equipment that is just below the export guidelines but which, in the aggregate, would be subject to controls.[41]

Information about the weak points in the proliferation chain may be shared among members of the Group, but this depends on good intelligence and a high level of co-operation. Sometimes, a state may even turn a blind eye to it. Member states must use their own domestic legislation to punish transgressors, and the tenacity of enforcement can vary widely between states.

That the Group exists at all and functions in a fairly harmonized manner, could be interpreted as a successful venture in itself. It has succeeded in raising awareness of states concerning the number of loopholes found in national export controls. And most important, it has shown by its very structure that export controls cannot exist in a vacuum if they are to be successful against the proliferation of weapons.

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contrast to the COCOM era prohibition on technologies, where the West once enjoyed a monopoly, there is no such monopoly on chemical weapons.

[41]As quoted in Elisa Harris, op. cit., 132. The remarks of William Webster, former Director of Central Intelligence are taken from an address before the World Affairs Council of Boston, 12 April 1990.

Unless there is a co-ordinated and co-operative effort among major suppliers, loopholes will always exist.

Section 3.1.2-Proposed International Land Mine Control Regime

If it comes to fruition, the proposed international control regime currently on the table for land mines will be a first of its kind in many ways. As a supplier regime, it is unique, as it does not focus on dual-use technology or on weapons components. This regime would focus solely on one small weapon in the wider conventional weapons trade. For years, there have been proposals for controlling conventional weapons, but there has been no concrete action. The exceptions have been the Conventional Forces in Europe (CFE) Treaty and the UN Register of Conventional Weapons. The former is a wider part of arms reduction between Cold War adversaries and is not part of the conventional arms trade *per se*. The latter is merely a transparency measure with states declaring their major weapons holdings. At the time of writing, the Land Mine Control Regime or Programme (LCP), had not been officially established, and planning for it still appears to be in the embryonic stage. There is also not a great deal of information forthcoming in the open sources about this regime. But, it should also be remembered that the Australia Group was also slow to develop, enjoyed little publicity, and even today is still without formal structures. The purpose of this section is to examine the proposed functions of this regime and to assess its relevance and potential.

The idea of an international control regime for land mines came in response to the widening awareness in the early 1990s that the land mine problem had reached crisis proportions. It was realized that to prevent the situation from deteriorating further, a proactive approach would also have to be taken to restrict access to these weapons. The main, and at the time the only forum available to accomplish this task was the 1981 Convention on Conventional Weapons (CCW).[42] This treaty was in the process of revision because in its original form it was wholly inadequate to deal with the land mine crisis. The politics of implementing firm control mechanisms within treaty boundaries have proved to be very difficult. This has been evidenced by the fact that it has taken two extra conferences after the supposed final Review Conference to reach agreement. Therefore, it was thought to be more practical and expedient to sort out transfer and control issues in an alternate forum while the treaty's sticking-points were being resolved.[43] This proposed control regime would also have very close links with the CCW treaty just like the Australia Group has with the CWC. Moreover, if any loopholes or weaknesses still remained in the actual treaties, then a control regime would supplement the treaty.

[42] The full name of the CCW is the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects. The CCW has three protocols; the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices deals specifically with restrictions on the use of land mines. Nothing in Protocol II, however, addresses the acquisition and control of land mines.

[43] While both control regimes are meant to complement treaties, the relationship of the Australia Group and the CWC and the proposed Land Mine Control Programme with the CCW are slightly different. In the first case, the finished product of a CWC was not a reality, and the prospects for its culmination seemed distant. Thus, a control regime was necessary in the absence of any other measure. In the case of land mines, the relationship is not as straightforward. Very little faith in the CCW perhaps explains the enthusiasm for an outside regime like the LCP.

The concept of an international control regime was first proposed by U.S. President Bill Clinton in an address to the 49th Session of the UN General Assembly on 26 September 1994. In a speech dealing with the problems of peace and security in the Post-Cold War World, and specifically in the area of non-proliferation, President Clinton made the following reference to the land mine crisis and measures to combat it:

> And today, I am proposing a first step toward the eventual elimination of a less-visible, but still deadly threat: the world's 85 million anti-personnel land mines-one for every fifty people on the face of the Earth. I ask all nations to join with us and conclude an agreement to reduce the number and availability of those mines. Ridding the world of those often hidden weapons will help to save the lives of ten of thousands of men and women and innocent children in the years to come. [44]

Although the language of this statement sounds rather grandiose, President Clinton cautiously mentioned his initiative as a 'first step' in the elimination of land mines. He was pragmatic enough to realize that it would be very difficult politically to support a total ban at the time. The Clinton plan for an international control regime includes the following elements: 1) Modifying of land mine stockpiles so that only a very small percentage are NSD (non self-destructing); 2) Limiting the transfers of land mines only to parties that have signed up to the obligations of the CCW; 3) Prohibiting transfers of anti-personnel mines to states who have provided anti-personnel mines to ineligible parties and; 4) Prohibiting exports of NSD mines.[45] In addition, "The proposed control regime would also prohibit the production, stockpiling, and export of any mine that is illegal to use

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[44]See William J. Clinton, Address to the 49th Session of the UNGA, United Nations, New York, September 26, 1994, as reproduced in The United States Mission to the United Nations Press Release, USUN 124-(94), 5.

[45]Sarah Walkling, "Clinton, at UN, Proposes New Land Mine Initiative", in Arms Control Today, November 1994, Vol. 24, No. 9, 30. See also *Financial Times*, 24 January 1995, and U.S. Department of State (DOS) Dispatch, "U.S. Policy on a Landmine Control Regime", September 26, 1994, Factsheet, October 10, 1994.

under the CCW"[46] This would of course depend on very careful wording of Protocol II to the CCW, where more often than not, a particular type of mine is merely restricted (not banned outright) or is allowed to be used under particular circumstances.

Ironing out and implementing such a regime has taken longer than expected. Reports on the progress towards this regime since President Clinton's speech have been very sketchy. At a meeting of 22 states organized to discuss the successor regime of the now defunct multilateral export control regime, COCOM, it was reported that these same states had reached a tentative agreement to ban the international sale of land mines.[47] At the 40th Annual Session of the North Atlantic Assembly held in Washington in November of 1994, Resolution 249 on "Land Mine Eradication Measures" was adopted. Resolution 249 states that the NAA Assembly is:

> Convinced that this enormous and pressing humanitarian problem can only approach resolution by establishing an effective internationally agreed control regime that places strict limitations on the design, production, use and transfer of all land mines and other such ordnance,...[and that member states of the NAA should] support energetically the Clinton administrations' proposal for a new International Land Mine Control Regime as a matter of priority"[48]

The only major international meeting dedicated specifically to this proposed regime was held in Budapest, 29-30 June 1995 at the initiative of the United States and the United Kingdom. Thirty-one states were represented at this meeting. Participants met to discuss proposals for a land mine control regime/programme, based upon President Clinton's initiative at the UN and the

[46]Ibid., and U.S. Department of State Dispatch, "U.S. Initiatives for Demining and LandMine Control", Factsheet, February 6, 1995.
[47]*Financial Times,* 17 November 1994.

British Government's Code of Conduct proposal introduced at the August 1994 Preparatory Conference of the CCW.[49] The participants concluded that controls on the export of mines was an urgent matter and that at some future point, production and stockpiling issues would also have to be included in the controls. While it is important that a large number of states did attend this conference, China, a major supplier, did not.[50] A control regime with the participation of the major states heightens its validity, but its ultimate success depends on the participation of all the major suppliers. It has been reported that another meeting will be convened this year.[51] Sources, however, at the U.S. Arms Control and Disarmament Agency have reported that the Landmine Control Programme has been held in abeyance so that its work would not interfere with the CCW review process, and so that the outcome of that review could be taken into consideration. Since the review process was completed in May of 1996, it remains unclear how land mine control issues will proceed in the future, either through the LCP, the CCW, or the Conference on Disarmament.[52]

Why have land mine control issues been hijacked from a treaty forum to a control regime? The answer lies in a variety of motivations. A realist would argue that the CCW, already acknowledged to be weak, will still contain significant loopholes even in a revamped state, and thus in the practical world it is better to have a

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[48]See "Resolution 249, Land Mine Eradication Measures", Policy Recommendations, North Atlantic Assembly (NAA) 40th Annual Session, Washington: D.C. November 1994, 8.
[49]FCO, Land Mine Control Programme, 1 and 4. The British Code of Conduct was introduced at the August 1994 Group of Experts Meeting in Preparation for the Review of the CCW. The Code of Conduct was designed as a guide to how states should responsibly conduct their exports of mines and was meant to be 'politically, rather than legally, binding'.
[50]Tom Masland and John Barry, "Buried Terror", Newsweek, April 8, 1996, 24.
[51]Ibid.

back-up or complementary regime. Another motivation for separating control issues from treaty boundaries lies in the fact that many states were reluctant to debate or include arms control and disarmament issues in what was generally thought to be a humanitarian forum. It could also be argued that it is often very difficult for states to consent to treaties which include too many obligations. As a result:

> ...[T]he U.S. is working separately to draw makers and users of mines into a more vigorous code of conduct. The reason Washington gives for thus bypassing the UN is more tactical: if all the most far-reaching proposals on land mines are built into a UN Convention, then many countries will refuse to sign it and be left outside all regulation.[53]

If some states are unwilling to make commitments at the present time, then it might be more practical to place the real controls in another forum, so that more states would feel comfortable and thus be willing to ratify the convention.[54] The tenuous review process of the CCW has illustrated that it is extremely difficult to get states to agree to firm controls. Peter Herby of the ICRC in Geneva has speculated that perhaps there was not sufficient political will to include tough export controls in the treaty as it could cause problems for adherence. While an extra-treaty export control regime might be a more practical option, politically it might also not be very wise.[55] If the treaty is to be seriously reviewed, but at the same time certain states wish to keep specific issues outside it, the integrity and validity of the treaty itself is placed in question.

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[52]Information supplied by Kate Rodriguez of the Bureau of Intelligence, Verification and Information Management, U.S. Arms Control and Disarmament Agency.
[53]*Financial Times*, 24 January1995.
[54] It could also be argued that states which object to particular issues being addressed in the treaty would also object to them in a control regime. While this may be true, at least some action can be taken by the states which are in agreement, and therefore they can make a contribution towards reducing the supply of these weapons. Some progress on this matter is better than none at all.
[55]Interview with Peter Herby of the ICRC.

Another motivation for establishing a separate control regime may be political. This viewpoint is rather sardonically expressed by David Gowdey, former Demining Consultant to the UN Department of Humanitarian Affairs:

> Transfers relate to the proposed international control regime only because the U.S. wants it to. Transfers could easily be addressed in the treaty, but that would give the French credit and the U.S. none. Since this is a major political issue for the U.S., they want to propose something to take over from the Moratorium that will have the U.S. stamp on it-hence this proposed regime. Of course U.S. manufacturers want to ban the export of mines other than their own, but I doubt this will happen. If the regime is to be a success it will have to find a common ground. If the treaty is a big success, the French and the EU get the credit. If Uncle Sam stops the scourge of land mines with U.S. proposed instruments, Uncle Sam gets the credit. Much of this is about face, and who gets the international good guy awards. That's the way the system works in these types of situations.[56]

One of the fundamental questions or criticisms of this regime, is the issue of common ground. At the moment, this proposed regime is seeking to ban non-self-destructing (NSD) or what is commonly known as "dumb" mines. The reasoning for targeting these mines in the control regime and in the treaty certainly has merit. These type of mines remain in the ground for years until disturbed, causing casualties long after the conflict has ended. They are also the simplest and cheapest type of mines to produce. On the surface, this type of regime would appear discriminatory as the more advanced producers of mines are allowed to export at will while poorer countries must endure limits on mines more useful and common to them. Moreover:

> Other critics say the ban on NSD mines will not stop the indiscriminate killing because the new regime could actually increase the demand for self-deactivating (SD) landmines. They say if *only* the U.S. and other developed countries

[56]Written communication with David Gowdey. When he is referring to the French taking credit, he is referring to the fact that the French government was the first to call for a Review Conference of the CCW. In addition, at the Group of Governmental Experts Meeting in Preparation for the Review Conference of the CCW that took place over several sessions in 1994 and early 1995, the U.S. qualified only for observer status as it had never ratified the Convention. But the United States ratified the CCW shortly before the Vienna Review Conference in September 1995, giving the U.S. delegation full voting rights at the Review Conference.

> produce, and sell the more expensive SD land mines, developing states will have little incentive to support any limits on any type of land mine.[57]

The type of controls in this regime as it is envisaged now would seem to encourage the horizontal proliferation of these weapons. The restrictions do not apply merely to certain parties but rather against certain types of mines. In the case of land mines, the more advanced, industrialized states are placing limits on land mines, but only upon a certain type, allowing much more leverage in the use of high technology mines which are not as commonplace for poorer states. According to Senator Patrick Leahy (D-Vt), the main proponent of the U.S. Land Mine Moratorium legislation, "I am skeptical that an elaborate system of rules, which permits some kinds of mines but not others, can work in the real world."[58] So although the humanitarian reasoning for restricting those particular mine types is valid, it is also discriminatory and hence problematic.

Besides the issues of discrimination and legitimizing one type of mine over another, the more practical problem of finance may inhibit this control regime "because self-destructing mines are much more expensive than long-life ones, [and] developing countries have argued that they cannot enter the U.S. proposed system unless rich countries help them."[59] As the majority of mines stockpiled by poorer states are NSD, there is little incentive for them to incur the expense of refurbishing a weapon system. If these states are truly persuaded by the humanitarian argument, then there still is the practical problem of finance. In the START agreement concluded between the United States and Russia, the United

[57]Walkling, op. cit., (November 1994), 30.
[58]Senator Patrick Leahy as quoted in Walkling, op. cit., (November 1994), 30.
[59]*Financial Times*, 24 January 1995.

States has agreed to make funds available for the destruction costs of nuclear weapons material. If financial incentives are not offered, then it is very difficult to put another state to the test in terms of its commitment to non-proliferation in any form. A state may plausibly claim that while in spirit they are willing to disarm, owing to the lack of finance they cannot. If practical incentives are offered to them, then the excuse list is much more limited.

Finally, allowing exports to be delivered to states parties while prohibiting exports to states which are deemed ineligible parties also presents technical problems. First of all, what happens when a state party uses mines illegally or transfers them to an ineligible party? A fundamental problem with arms sales is that today's friend is tomorrow's enemy. Perhaps the biggest problem with these proposed controls is how to actually verify them, and more important, how will they, or even how can they, be enforced? Land mines are so compact that they do not need a large production or storage infrastructure. In addition, the technology to produce land mines is very simple and can easily be reproduced. Thus, verification of any controls may prove difficult, especially if parties remain outside the control regime.

Section 3.2-National and International Moratoria

Initially, under the sponsorship of Senator Leahy, the Landmine Moratorium Act was introduced in the U.S. Senate in July 1992 and was subsequently included in the FY93 Defense Authorization Bill which became law in October 1992. The Bill states that U.S. manufacturers cannot sell, export, or transfer abroad any anti-

personnel mines for a period of one year. This legislation also encouraged the government to lead the international community by example, in promoting the land mine moratorium on the international scale, or to seek modification to the existing Protocol II of CCW Convention.[60] In 1993 this moratorium was extended for a further three years.[61]

In addition, Senator Leahy and Representative Lane Evans introduced legislation in Congress in June 1995 designed to implement a one year moratorium on the use of land mines, and convince other countries to take similar action. Senate legislation S.940, "Landmine Use Moratorium Act" and H.R. 1876, calls for the President to fully support modifications at the CCW Review Conference; three years after the Bill becomes law, the U.S. military would stop using land mines for a period of one year except along internationally-recognized borders which are marked and monitored.[62] During this time period, the President should also be encouraging other states to do the same. If this action were to be successful, then the moratorium could be extended for several more years. Finally, S.940 would also prohibit the export of these land mines to other countries if they were not following the limited-use guidelines.[63] As Senator Leahy argues, "rather than encouraging the widespread use of self-destruct mines, S.940 seeks to severely limit the use of all anti-personnel mines, thus moving unambiguously toward a

[60]See Senator Patrick Leahy, "Landmine Moratorium: A Strategy for Stronger International Limits", Arms Control Today, Jan/Feb 1993, 11.

[61]In February of 1996, President Bill Clinton signed into law a bill extending the moratorium on the export and sale of AP mines for a further year.

[62]President Bill Clinton signed in January 1996 an amendment to the Foreign Operations Appropriations Act which stated that starting in 1999, and initially for a one year period, it will be forbidden to use land mines except in demilitarized zones and borders. It was also reported that the Defense Department opposed the amendment and were unsure of how the amendment would

complete international ban."[64] By instituting a moratorium on the use of land mines in addition to their export, the United States hoped to provide a normative precedent and lead by example.

In keeping with the spirit of its national land mine moratorium legislation, the United States was also the sponsor of the international land mine moratorium legislation placed before the United Nations General Assembly. Resolution 48/75K, requesting that member states introduce moratoria on the export of anti-personnel mines, was adopted unanimously on 16 December 1993. Resolution 48/75/K states that the UN General Assembly is:

> Convinced that a moratorium by States exporting anti-personnel mines that pose grave dangers to civilian populations would reduce substantially the human and economic costs resulting from the use of such devices and would complement the aforementioned initiatives....[and therefore] Calls upon States to agree to a moratorium on the export of anti-personnel land-mines that pose grave dangers to civilian populations; [and] Urges states to implement such a moratorium.[65]

Some of the reservations declared by UN members before the adoption of the Resolution shed light on how cautiously or how seriously states accepted the moratorium. During the debating period, strategic, economic, and political concerns were voiced by various parties. The United Kingdom took the position that as Protocol II of the CCW allowed self-destructing mines, "Possession of those mines should not be restricted to countries with the capacity to manufacture them"[66] This was a circumspect way of saying that states which produced these

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affect military policy. See Sarah Walkling, "CCW Negotiators Make Headway on Strengthening of Landmine Protocol", Arms Control Today, February 1996, 27.

[63]See Arms Control Today, July/August 1995, 24, October 1995, 24.

[64]Sen Patrick Leahy, "The CCW Review Conference: An opportunity for U.S. Leadership", Arms Control Today, September 1995, 22.

[65]For full text of Resolution, see Resolution 48/75/K, "Moratorium on the export of anti-personnel land-mines", in The United Nations Disarmament Yearbook, Vol. 18, 1993, 211.

[66]UN Disarmament Yearbook (1993), 210.

high-tech mines should be allowed to sell them to whomever they pleased. Other states expressed concerns that their rights to obtain weapons for legitimate self-defence should not be impeded, or that existing security arrangements should not be affected. Still others felt that the scope of the moratorium was too limited as it did not cover production, stockpiling and use of anti-personnel mines.[67] Nevertheless, at a very basic level, most states found that the scope of the moratorium was acceptable to their policy requirements.

A moratorium on the export of land mines has certain innate flaws. At the most basic level, it is requested that state parties only accede to the resolution. There are no binding arms control agreements attached to the moratorium, or any implementation or verification measures. States can also interpret the language of the Resolution to their own advantage thanks to loopholes in its language content. According to David Gowdey:

> The moratorium has enormous loopholes. As it was originally phrased it is prohibited to export mines deemed excessively harmful to civilians. What the hell does that mean? Is there an AP mine whose detonation is not excessively injurious to a child? However, to military men this is understood to mean non-self-destructing AP mines, to arms exporters this is deemed to mean something besides standard existing mine types, and to civilians it means nothing at all. Given this definition you can export components, technology, whole mine factories, anything you want. The loophole is so big you could drive a truck full of VS-50s through it.[68]

These vagaries of language can tarnish the shine from the altruistic ideals of an export moratorium. For example, the moratorium does not specify a particular mine type although it is implied to be NSD or "dumb mines". The moratorium is also silent about the production of land mines and the export of land mine

[67]Ibid.

[68]Author's correspondence with David Gowdey, Demining Consultant to the UN Department of Humanitarian Affairs, February 1995.

components. This is an important omission, as a state may truthfully claim that it is not selling mines when in reality, it may be involved in a joint venture with another state where business is being conducted as usual. Land mines are frequently produced under licence in a state other than that of its source, making it extremely difficult to trace the origin of land mines.

Despite its weaknesses and vagaries, the UN moratorium was probably the only type of international control concession which states were willing to make at the time. Through a mixture of realism and foresight, the United States introduced the draft resolution with the acknowledgement that unilateral moratoria were not enough in themselves but that an "international export moratorium was an important first step."[69] 'First Step' is perhaps the most accurate description of this moratorium. While the moratorium is far from perfect, it does encourage international co-operation to reduce the number of land mines made available to irresponsible parties.

Section 3.3-Unilateral or National Restraints

Section 3.3.1-Land mines

The UN Moratorium Resolution noted that "...several states have already declared moratoriums on the export, transfer, or purchase of anti-personnel land mines and related devices." In concert with and encouraged by the international moratorium, other states have actually imposed unilateral restrictions on the manufacture or stockpiling of land mines. Some have even gone as far as to destroy their own stockpiles and no longer produce land mines at all. Still others have joined the campaign for a total ban on land mines. These unilateral measures approach

disarmament, although to be truly effective, the measures must be universal.[70] For example, Belgium had a moratorium in place not only regarding the export of anti-personnel mines, but also on their manufacture and stockpiling. In other words—a total ban. To complement and solidify this ban, Belgium took additional measures in March 1995 to destroy 340,000 anti-personnel mines currently under military control. The Netherlands has also decided to destroy its 423, 000 anti-personnel mines in stock and in March 1996 it renounced the use of all mines, to become effective immediately.[71] France and Germany have also halted the production and export of these weapons. In April 1996, Germany also renounced the use of all mines, as did Canada earlier in the year. Italy, which produced and exported vast quantities of land mines, has also confirmed that it will cease producing and exporting anti-personnel mines.[72]

Most of the members of the European Community are trying to harmonize their policies. In keeping with this trend, the European Union Foreign Affairs Council in its "Joint Action on Land Mines", 10 April 1995, agreed to a "common moratorium on the export of AP land mines."[73] In the wake of the global land mine ban campaign and the CCW Review Conference at least 39 states have now united in calling for a total ban on land mines, including ten of NATO's sixteen

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[69]UN Disarmament Yearbook, 1993, 209.
[70]UN RES 48/75 Moratorium on the export of anti-personnel land mines, in UN Disarmament Yearbook, (1993), 211.
[71]See Trust and Verify, The Bulletin of the Verification Technology Information Centre (VERTIC), No. 55, March 1995 and Stephen Goose, "CCW States Fail to Stem Crisis; U.S. Policy Now an Obstacle", Arms Control Today, July 1996, 16.
[72]"Landmines Update", Saferworld Update, Autumn 1994, 3.
[73]See FCO, Land Mine Control Programme, 3. Previously, the European Parliament passed a resolution in December 1992 calling for member states to "declare a five year moratorium on the export of mines and training in their use." See also Boutros Boutros-Ghali, "The Land Mine Crisis A Humanitarian Disaster", Foreign Affairs, September/October 1994, 12.

members.[74] As a result of these developments, it may be inferred that the advocacy campaign is working and that states are reconsidering their individual policies. In the fall of 1996, Canada is will host the first governmental conference dedicated to supporting a total ban.[75] But until all the major military powers and suppliers of mines support a total ban, these national policies are probably proffered in vain.

While some states have unilaterally decided to renounce these weapons, others have been more hesitant to change policies. Perhaps the real test of a state's commitment to resolving the land mine problem is whether it actually produces the offensive mine in question, and whether it is willing to take the ultimate step and destroy its own stockpiles. For example, the United Kingdom announced that it would observe a moratorium on the export of NSD mines but "as the U.K. has not exported low-tech styles of mines for over a decade this represents no real change in policy."[76] In March 1995, the British government announced that it would ban the export of non-detectable mines; interestingly enough, the United Kingdom does not actually manufacture non-detectable mine types. British policy could be perceived as a policy of appeasement. It certainly will not hurt military or commercial interests to place a ban on weapons that are negligible in importance to them. It should be remembered that shifts in policy may not always

[74] Most recent press reports have placed the number of states calling for a total ban at 39. It is likely that this number will increase as the number of states joining the land mine ban campaign has increased steadily throughout the year. In February 1996, for example, only 22 states supported a total ban on land mines. See *International Herald Tribune*, June 4, 1996, 8, and Arms Control Today, February 1996, 27. The NATO members calling for a total ban are as follows: Belgium, Canada, Denmark, France, Germany, Iceland, Luxembourg, Netherlands, Norway, and Portugal. See Goose, op. cit., 14. For a comprehensive list of countries supporting moratoria or bans on mines or particular types of mines see FACTFILE, 32-34, in Arms Control Today, July 1996.

[75] Canada has now become the leader of the pro-ban countries with the so-called "Ottawa Process".

occur uniformly, as states have to consider humanitarian, political, military, and commercial interests in deciding how restrictive their weapons policies should be. In the middle of 1996, for example, the British government appeared to reverse its earlier policies and advocate a total ban, albeit one with particular conditions.[77] The United States has also vacillated with policy. Although it has been the leader in a great deal of land mine restraint policies, the United States has been reluctant to demand an unqualified ban on all land mines.[78] According to a Pentagon spokesman, the United States was looking for a "formula that will meet the President's promise of eliminating the use of anti-personnel land mines...but we have to balance the humanitarian imperative with the need to protect our forces."[79] International co-operation or pressure to co-operate can only work if the national or unilateral will is present in the first place.

Section 3.3.2-Chemical Weapons

The development of national restraints on chemical weapons has encompassed a variety of decisions which have occurred gradually over the decades. In contrast,

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[76] Saferworld Update, Autumn 1994, 3.

[77] The U.K. government renounced the use of all land mines and called for a total ban. David Davis, a Foreign Office Minister, announced to Parliament 22 April 1996 that the U.K. would shift its policy to support a global ban on all land mines. Meanwhile, the U.K. government reserves the right to use AP mines until a full ban is in place if there is no other alternative, and if use is deemed essential after close consultation. The U.K. will destroy 44 percent of its current stockpile of "dumb mines". The U.K., currently does not retain any stocks of smart mines, but reserves the right to procure them should the need arise. Information supplied by the Non-Proliferation Department, Foreign and Commonwealth Office, 20 June 1996.

[78] The Pentagon announced in the Spring of 1996 that the Pentagon would review its land mine policy, but little seems to have come out of that review. The Chairman of the U.S. Joint Chiefs of Staff, General John Shalikashvili was quoted as favouring eliminating all anti-personnel mines in March of 1996 but later added the stipulation in subsequent interviews that he had to take into account the safety of U.S. forces as well. See Trust and Verify, The Bulletin of the Verification Technology Centre (VERTIC), No. 65, April 1996, 2-3.

[79] Philip Shenon, "Joint Chiefs Amend Mine-Ban Effort", *International Herald Tribune*, May 13, 1996, 3.

the decision to stop production, use, and stockpiling of mines occurred very rapidly over the past few years, mostly in response to the growing anti-mine campaign. For chemical weapons, it has been more of a case of "deproliferation"[80] or the waning of interest in maintaining a chemical arsenal. Although there has always been a humanitarian motivation within the military establishment in not resorting to chemical weapons use, there was also a reluctance to relinquish these weapons until it was possible to determine that they were no longer important to national security. If these weapons were not perceived to be cost-effective or useful militarily, there was no need to keep arsenals current. But it should be pointed out that not updating chemical weapons capabilities, or allowing them to deteriorate, is not the same thing as physically destroying them. Military establishments are notoriously hesitant to relinquish a weapon. Nor have these practices prevented states from seeking to renew or upgrade their chemical weapons capabilities, while also considering the option of banning them completely. These actions have demonstrated an ambivalence in pursuing chemical weapons control policies.

For example, although the United States possesses a significant chemical weapons stockpile, it had not been updated since 1969, at which time the United States ceased to produce chemical weapons. In the mid-1980s there was pressure to modernize the U.S. chemical weapons stockpile and "replace current, outdated, and perhaps dangerously stored and transported chemical munitions with new

[80] Julian Perry Robinson coins this term in his description of the state of chemical weapons in the current international security environment. See Robinson, op. cit., in Rioux (ed.), 59.

binary chemical weapons that produce no lethal hazard until fired."[81] The case for implementing a U.S. binary weapon programme was unpopular not so much because it contradicted the goals of treaty banning chemical weapons but because it was controversial on the domestic public front, with environmentalists and with NATO allies.[82] Despite these vacillations of policy, "Congress has already taken ... [the U.S.] out of the chemical weapons business, passing a law requiring destruction of the entire U.S. chemical weapons stockpile by Dec. 31, 2004."[83] The Soviet Union had also announced in 1987 that it had stopped production of chemical weapons although this was actually not quite a truthful statement.[84] Nevertheless, the Soviet Union was also losing interest in the chemical weapons option.

Other states have more or less given up their stockpiles or refused to have any chemical weapons placed on their territory even when part of an Alliance. European countries, in particular, seemed to have lost interest in the chemical option quite early on. This was due partly to the fact that Europe was the theatre for major chemical weapons warfare in World War I, and the "NATO allies have

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[81] Part of the reason for the deterioration of U.S. chemical weapons stockpiles was the strain on resources of the U.S. military from the Vietnam war plus public awareness of the environmental hazards of chemical weapons agents. See Frances Norton, "Report Summary of Hugh Stringer, Deterring Chemical Warfare: U.S. Policy Options for the 1990s", The Atlantic Community Quarterly, 24, No. 2, 1986, 168.

[82] For example, when the U.S. was soliciting support amongst its NATO allies for its binary weapon programme, the U.S. had to agree to remove its chemical weapons from German territory in return for German support on these weapons. See Elisa Harris, "Chemical and Biological Arms Control", in F. Hampson, H. Von Riekhoff and J. Roper, (eds.), The Allies and Arms Control, (Baltimore: The Johns Hopkins University Press, 1992), 78.

[83] John Holum, Director, U.S. Arms Control and Disarmament Agency, "The CWC: Time for a Harvest", Remarks to an American Bar Association (ABA) Seminar on Implementing the CWC, February 7, 1995, 3.

[84] Goldblat, 97. It was reported in *The Washington Times* that the Russian Defense Ministry had stated that chemical weapons production had not altogether stopped nor had testing although such activities were officially banned in April 1992. See *The Washington Times*, 6 December 1994.

recognized that if chemical weapons were used in a future European war, they would again suffer a disproportionate share of the costs."[85] The United Kingdom abandoned its offensive chemical weapons capability in the 1950s, although it is alleged it had an agreement with the Americans to access U.S. stocks should the need arise. In addition, there was also discussion about British rearmament although this potentiality never came to fruition. France retained its chemical stockpile and at one time considered updating it, but later it restricted its activities to a research programme only.[86]

NATO Allies were given the option of having U.S. chemical weapons placed in their territories even if they no longer retained their own stockpiles or had ceased production. But this became a rather unpopular choice for most of the Allies. Germany, Italy, and the United Kingdom reserved the right to deny any possible future deployments of chemical weapons on their territory, regardless of the reason. Denmark, Greece, Iceland, Luxembourg, the Netherlands and Norway absolutely refused to even consider the deployment of chemical weapons on their territory.[87] What these reservations and refutations indicate is that various states were establishing a norm against not only their own production and possession of chemical weapons, but also that they wanted nothing to do with chemical weapons at all. [88]

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[85] Harris, op. cit., in Hampson, et al., 76.
[86] Ibid., and Foreign and Commonwealth Office, "Non-Proliferation: Some Recent Developments", Background Brief, June 1995, 3.
[87] Harris, op. cit., in Hampson, et. al., 78.
[88] Besides normative reasons for not wanting chemical weapons on their territory, the nuclear deterrent was seen as sufficient protection.

Section 3.4-Bilateral Agreements

Another area engendering further attempts at controls was the area of bilateral agreements. Bilateral agreements are not applicable to land mines as they are not a strategic weapon type, and most of the proliferation has occurred in countries other than the country of manufacturing origin. More important, agreements on restrictions on land mines between two or more countries probably would not alter the land mine situation. In contrast, as the largest arsenals of chemical weapons were in the hands of the former Soviet Union and the United States, it has made sense for these two states to lead in any arms control negotiations. No multilateral agreements could be concluded without the co-operation of these two major players because "...the initiation of bilateral arms reductions by the two superpowers was a spur to further multilateral action, providing both leadership and assurances to other states."[89] Progress in superpower chemical weapons control has faltered within the prevailing political atmosphere. Until the late 1970s, most of the discussions on limiting chemical weapons remained within the boundaries of the multilateral disarmament conference. In 1977, however, the U.S. and the Soviet Union had resumed bilateral talks but they later stalled due to deteriorating political relations between the two superpowers that pervaded the early 1980s.[90] Once relations had improved with the ending of the Cold War, bilateral negotiations charged into high gear in 1989.

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[89]Joanna Spear, "On the Desirability of Arms Transfer Regime Formation", Contemporary Security Policy, Vol. 15, No. 3, December 1994, 92.

[90]In March of 1977, U.S. President Jimmy Carter reopened negotiations with the Soviets on the banning of chemical weapons. But there was a cessation of negotiations in 1981 which had to do with the Soviet invasion of Afghanistan and the fact that discussions had stagnated on crucial issues. Nevertheless, these earlier discussions did provide a substantive basis for future progress on chemical weapons when they were continued. See A Jack Ooms, "Chemical Weapons: Is Revulsion

In September 1989 at a Foreign Minister's meeting held between the two sides in Jackson Hole, Wyoming, a "Memorandum of Understanding" or MOU was signed committing both parties to bilateral verification exercises and information exchange.[91] The MOU was roughly divided into two separate phases. Phase I included the basic exchange of data on both sides' chemical weapons capabilities and visits to military and civil facilities by each party. This exchange began very quickly in December 1989 and was completed by February 1991.[92] The second phase of the MOU was to be enacted once the reality of a completed CWC was at hand. This meant more detailed exchanges and experiments designed to complement the CWC's work. Both sides signed updated implementation documents in January of 1994, and in June of 1994 a detailed exchange of information on chemical weapons facilities was concluded by both sides. Finally, both sides conducted on-site inspections to verify these declarations. Each side was required to conduct inspections at sites from a list provided by their counterparts; two of these inspections were of a routine nature, one was a trial challenge inspection, and the final two were actual challenge inspections. Phase II was completed in December 1994 with the data exchanged and inspections conducted.[93] Basically, the Wyoming Memorandum of Understanding can be seen as a Confidence Building Measure (CBM) between the two sides encouraging openness and transparency with the goal of complementing some of the practical

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a Safeguard", in The Atlantic Community Quarterly, 24, No. 2, 1986, 162 and Charles Flowerree, op. cit., in Burns, (ed.), 1011.

[91]See Flowerree, op. cit., in Burns, (ed.), 1016.

[92]Ibid., and ACDA, "U.S.-Russian Wyoming Memorandum of Understanding on Chemical Weapons", Fact Sheet, 1 August 1994. ACDA Chemical and Biological Weapons Reader, February 1995 and ACDA, "Eliminating Chemical and Biological Weapons", Annual Report to Congress, 1994, Section II, 25.

measures of the CWC. These bilateral CBMs should not be underestimated as they provide a trial run and framework for the CWC. As Russia and the United States retain the largest stockpiles, this sort of bilateral co-operation is an important indication of how a CWC regime might fare.

The next positive measure taken up by the superpowers was at the Malta Summit in December 1989. President Bush offered to halt binary production of chemical weapons (a major sticking point for negotiations not just for the Soviets but also for those involved in the multilateral process) if the Soviets accepted the proposals he had made at the United Nations the previous September. Bush had proposed that both sides reduce their chemical weapons stockpiles by 20 percent while awaiting the finished CWC. Earlier, the U.S. had reserved the right to continue with binary production within particular limits and to retain two percent of its chemical weapons stockpile. This stockpile was only to be destroyed once all chemically-able nations had officially joined the CWC.[94]

With the major stumbling block of binary weapons production now resolved, the two sides signed an agreement in June of 1990. The result was the United States-Soviet Bilateral Agreement on Destruction and Non-Production of Chemical Weapons and Measures to Facilitate the Multilateral Convention on Banning Chemical Weapons, or in more condensed form the Bilateral Non-Production and

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[93]Ibid.

[94]The proposed production of binary agents and retention of a stockpile by the U.S. appeared contrary to the goals of a global chemical weapons ban although the U.S. was actively participating in negotiations to conclude a CWC. Although U.S. policy seemed contradictory, it can be perceived as an attempt to achieve universality of the CWC. Most states viewed this manoeuvre as a means for one powerful state to keep an advantage while demanding that others give up, or forgo

Destruction Agreement (BDA). The main intention of this agreement was to facilitate the destruction of all but 5,000 tons of the superpower chemical agents and to halt any future production.[95] The BDA, however, did not enter into force.[96] Technical difficulties were in part responsible for problems in implementing the agreement. The verification protocol proved difficult to implement within the original time frame as neither party had fully worked out all the technical requirements for destroying its own stockpiles.[97] The agreement has now been suspended, as both sides agreed to let the EIF of the multilateral CWC take precedence.[98]

The only further progress on bilateral chemical weapons came in June 1992 at a summit meeting between Presidents Bush and Yeltsin. Both parties pledged their commitment to the abolition of chemical weapons, and promised to instruct their negotiators in Geneva to facilitate the conclusion of the CWC by August 1992. Their mutual support of the Wyoming MOU was also reaffirmed and the parties pledged to update the 1990 BDA and bring it into force. A further agreement was negotiated entitled the "Agreement on the Safe and Secure Transportation, Storage, Destruction of Weapons and the Prevention of Weapons Proliferation". This agreement included measures to aid Russia on the destruction of its

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all chemical weapons. But by May of 1991, the U.S. had dropped this precondition. See Flowerree, op. cit., in Burns, (ed.), 1016, and Harris, op. cit., in Hampson, et al., 92.

[95]Goldblat, op. cit., 97-99.

[96]Basically the BDA was never ratified or entered into force. See ACDA, Factsheet, "Chronology of Arms Control and Related Treaties and Agreements Including Confidence and Security Building Measures, and Measures Related to Nonproliferation, Transparency and Defense Conversion", December 20, 1993, 9.

[97]In addition, "because of technical, economic, and political problems, the Russian Republic's efforts to create a capability for the safe destruction lagged markedly,..." See Flowerree, op. cit., in Burns, (ed.), 1017.

Weapons of Mass Destruction and materials, (including transportation and storage of such hazardous materials) and "...provides the legal framework for U.S. financial support of Russian CW destruction. It entered into force upon signature in June 1992 and will remain in force for 7 years."[99]

This matrix of bilateral measures were negotiated to encourage a global CWC, but, one that would be in the superpowers' relative interests. Direct, bilateral negotiations have also moved the "power politics" between the respective sides out of the multilateral sphere, allowing them to thrash it out amongst themselves. Superpower co-operation on bilateral chemical arms control was needed to bring about the fruition of a multilateral CWC. Without such co-operation, it seems highly likely that the CWC would have been kept floundering in the Conference on Disarmament. As the issues of chemical disarmament are highly complex (i.e. disposal, verification, dual-use, etc.), it makes sense that the two sides with the largest arsenals have put their collective resources together to deal with these problems.

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[98]By "mutual agreement", the BDA was aligned with the CWC schedule requiring destruction of stockpiles 10 years after EIF. See ACDA, "Eliminating Chemical and Biological Weapons", 25. Also, Goldblat, 99, and Flowerree, op. cit., in Burns, (ed.), 1016-1017.

[99]For example, in July of 1992, under the Nunn-Lugar program, the U.S. and Russia signed an agreement offering 25 million U.S. dollars to plan Russian chemical weapons destruction facilities. A further 30 million dollars of this money was approved for Russia to establish a laboratory for environmental control of chemical weapons destruction, see ACDA, "Eliminating Chemical And Biological Weapons", 1994, 25. See also SIPRI Yearbook (1993), 273.

Chapter IV

The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (The CWC)

> As the Iron Curtain crumbled, the final curtain descended on the bilateral drama of superpower arms control. With the demise of the Soviet Union, fears of uncontrolled proliferation of weapons of mass destruction have largely displaced fears of nuclear conflagration....Given these concerns, the effectiveness of global treaties designed to eliminate these weapons from world arsenals or limit their spread is being questioned. Thus, multilateral arms control has moved from a supporting to a starring role on the world stage.[1]

The Chemical Weapons Convention represents an important milestone in multilateral arms control and disarmament. Prior to the present CWC, there were other attempts to restrict or even prohibit the use of these weapons through both IHL and arms control venues. Efforts have also been made to restrict the supply of these weapons, and states have practised self-restraint in their chemical weapons policies. None of these efforts has resulted in the complete abolition of these weapons. The fact that these weapons warrant a comprehensive treaty demonstrates that they are considered a serious threat and a prioritized issue on the arms control agenda. The purpose of this section is to examine the Chemical Weapons Convention (CWC). This will begin with a brief review of the antecedents and negotiating history of this treaty, followed by an explanation of what the CWC has set out to do, and conclude with a critique of its strengths and weaknesses.

Section 4.1-Antecedents of the CWC

> If any long and difficult enterprise could be said, in that rather shopworn analogy, to have been like giving birth to an elephant, the negotiations that produced the 192-page Chemical Weapons Convention (CWC) was it. The idea of a Convention banning chemical weapons, conceived in 1968, was in gestation

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[1]Marie Isabelle Chevrier, "Impediment to Proliferation? Analysing the Biological Weapons Convention", Contemporary Security Policy, Vol. 16, No. 2, August 1995, 72.

> for a decade and a half, and in delivery for nearly another decade....The completion of the CWC marks a watershed in the effort to control the accumulation and spread of weapons of mass destruction. [2]

The official signing ceremony in Paris in January 1993 of the CWC has often been acclaimed as the culmination of over 20 years of arduous negotiations. In reality, although aspirations to ban chemical weapons have been prevalent for most of the century:

> Interest in chemical weapons issues has fluctuated over time. It has tended to achieve more attention when other issues on the arms control agenda were stymied... In the aftermath of the [Geneva] Protocol little progress was made until the early 1970s. Then increased interest was due to America's use of Napalm and Agent Orange during the Vietnam War. The widespread use of these and their effects on the population led to mounting concerns to minimize the cruelty of war for civilians.[3]

There are three main periods of interest in chemical arms control and disarmament that are clearly identifiable in this century: the immediate Post World War I era; the 1950s and 1960s; and when chemical weapons were officially placed on the disarmament agenda.[4] The reality of a full chemical weapons ban would take almost 20 years to emerge from the Conference on Disarmament, with most of the important agreements coming only at the end of that period. Before examining the modern deliberations for a Chemical Weapons Convention, a brief review of this treaty's antecedents is in order. These antecedents serve as historical building blocks which have promoted incrementally the political consensus to ban chemical weapons. According to John Ellis Van Courtland Moon:

> Chemical and biological warfare (CBW) is widely regarded as cruel and inhumane. This revulsion has its origins in codes and customs, traditions and

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[2]Charles Flowerree, "The Chemical Weapons Convention: A Milestone in International Security", in Arms Control Today, October 1992, 3.

[3]Joanna Spear, "On the Desirability and Feasibility of Arms Transfer Regime Formation", Contemporary Security Policy, Vol. 15, No. 3 December 1994, 91.

[4] Chemical disarmament negotiations originated in the Committee on Disarmament in 1968, and concluded in its successor, the Conference on Disarmament.

> ways of thinking about the conduct and character of war stretching back into unrecorded time when today's chemical and biological weapons were inconceivable. It ultimately promoted the development of arms control measures—initially in the form of "law of war" and later as treaties—that sought to regulate or, often, prohibit CBW.[5]

The Treaty of Strassbury concluded by the French and Germans in 1675 is perhaps the first international agreement on poisoned weapons.[6] Much like this treaty is the Lieber Code of 1863, developed during the American Civil War, which states unequivocally that military necessity "does not admit of the use of poison in any way."[7] The first well-known international effort to prohibit poison weapons occurred at the Brussels Conference of 1874. Although the resultant Brussels Declaration was never adopted, it did represent an important yardstick for future prohibitions. According to Article 13 of this Declaration, the employment of poisons or poisoned weapons as a means of injuring an enemy is forbidden.[8]

Next there were the Hague Peace Conferences of 1899 and 1907 which produced declarations prohibiting the use of poison and gas weapons. At this time, it was recognized that technological developments had made these weapons all the more dangerous.[9] As a result, not only were the customary principles against the use of poisons reaffirmed, but the Hague Declaration Concerning Asphyxiating Gases (1899) declared that "the contracting Powers agree to abstain from the use of

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5 John Ellis Van Courtland Moon, "Controlling Chemical and Biological Weapons Through World War Two" in Richard Dean Burns (ed.), Encyclopedia of Arms Control and Disarmament, (New York: Charles Scribner's Sons, 1993), 657.

6 "Prohibition on Poisoned Weapons", in Burns, (ed.), op. cit., 1368.

7 See Dietrich Schindler and Jiri Toman, (eds.), The Laws of Armed Conflict, A Collection of Conventions, Resolutions and Other Documents, 3rd ed., Henry Dunant Institute, (Dordrecht: Martinus Nijhoff Publishers, 1988), 3-23, for a reproduction of the Lieber Code.

8 Ibid, 29. Brussels Conference of 1874, II-Project of an International Declaration Concerning the Laws and Customs of War, (The Brussels Declaration).

9 Van Courtland Moon, in Burns, (ed.), 659.

projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases."[10] Although this declaration was more in tune with the modern reality of chemical weapons, it still contained significant loopholes. The obligations of the prohibition were binding only upon the parties that had signed it; technically, an aggressor could attack a non-signatory without being in violation, although customary principles prohibiting poisons and unnecessary suffering would have to be taken into account. As only "projectiles" are specifically mentioned, other delivery systems could be used to deliver the same deadly chemicals. During World War I "...German forces had claimed that the lethal gas attack launched at Ypres had not violated the Hague Declaration; the gas had been released through cylinders, not shells."[11] Therefore, the spirit, if not the letter, of the prohibition was violated, thanks to loopholes in the treaty's language.

World War I demonstrated that these prohibitions and agreements were easily violated in the name of military expediency. In the war's immediate aftermath the only disarmament measure pertaining to chemical weapons was the Versailles Treaty, requiring Germany to relinquish its remaining stocks of chemical weapons. This was purely a unilateral measure as part of the wider disarmament of the losing side by the victors in World War I. The first multilateral effort aimed at prohibiting all cases of chemical weapons use was addressed in the Washington Conference of 1922, and the ensuing Washington Treaty on Use of Submarines and Gases in Wartime. Had this treaty been implemented, it would have constituted a comprehensive prohibition against the use of chemical weapons.

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10 "Outlawing Chemical, Bacteriological, and Biological Weapons", in Burns, (ed.) op. cit., 1389.
11 Van Courtland Moon, in Burns, (ed.), 664.

Just a few short years later, the Geneva Protocol of 1925 prohibiting the use of chemical and biological weapons was enacted:[12]

> The Protocol was envisaged, then, as a reaffirmation, in treaty form, of the long-recognized law of war prohibiting the use of poison. That prohibition, amounting to a customary rule, rested on a variety of legal foundations; immemorial custom, the practice of states (up to 1925), and *opinio juris* following the adoption of *inter alia* the Brussels Declaration of 1874 and (more particularly) the Hague Conventions and Regulations of 1899 and 1907. But in the war of 1914-18 it had been brutally thrown aside, at the expense of the suffering of some 1,300,000 gassed soldiers.[13]

The Geneva Protocol was an auxiliary result of a conference sponsored by the League of Nations, entitled the Conference for the Supervision of the International Trade in Arms and Ammunition and in the Implements of War. The original Convention was never ratified and the Geneva Protocol became a treaty in its own right. At the Conference, the United States delegation first introduced the topic of chemical weapons as an international ban on the trade of chemical weapon materials. More practical delegates correctly surmised that it would be difficult to restrict the export of chemical agents, as states with large chemical industries could produce chemical weapons from their own resources if they so wished. It was also recognized that it would be very difficult to distinguish chemical agents destined for industrial use as opposed to military purposes. Therefore, rather than focusing restraints on production routes, it seemed simpler and more expedient to just ban the use of chemical weapons.[14]

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[12] The full name of this Protocol is the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare.

[13] Nicholas Sims, "Commonwealth Reservations to the 1925 Geneva Protocol", The Round Table, No. 324, 1992, 478.

[14] See A. Thomas and A.P.V. Thomas, Legal Limits on the Use of Chemical and Biological Weapons, (Dallas: Southern Methodist University Press, 1970), 70-73, for an account of these negotiations leading up to the Geneva Protocol.

The Geneva Protocol only prohibits the first use of chemical weapons because many states pledged to observe the Protocol with the reservation that they be allowed to retaliate in kind.[15] Consequently, the spectre of chemical weapons still loomed as states fearing a chemical weapons attack thought it would be wise to retain them for defensive use. While parties have adhered to the Protocol out of good faith, they also did so out of fear of retaliation. In cases where the Protocol was violated, the initiation of chemical warfare has occurred at times when it was unlikely that there would be any immediate retaliation.

The strongest criticism against the Geneva Protocol is that it does not disarm states of chemical weapons by prohibiting their acquisition, production and stockpiling. In addition, there are no verification or enforcement measures attached to the Protocol. As Geoffrey Best argues: "Legal prohibitions of weapons, unless they are of weapons of such a nature that no country is likely ever to possess them, are mere ploughings of the sand unless they are accompanied by convincing measures of verification."[16] If the illegal use of chemical weapons is not punished, then any agreement to not use them may be violated at will. The

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[15]The reservations had two components. In the first part, states reserved the right to be bound by the Protocol only against states that were also parties to the Protocol. In the second part, parties had a right to cease their obligations if another power failed to respect the Protocol. In these initial reservations, none of parties except for the government of the Netherlands made any distinctions between retaliation with chemical or bacteriological weapons. It was theoretically possible, therefore, that a chemical attack could be retaliated against with bacteriological weapons. The Netherlands government went on record as stating that bacteriological warfare was too horrendous to even consider for retaliatory use. Privately, it was felt that as the use of bacteriological weapons was so unpredictable, that they would not be an efficient weapon. Only the United States made this distinction as well, but it took almost 50 years to ratify the Protocol. Even when the Biological Weapons Convention was introduced, parties did not immediately withdraw their reservations. Parties have had to resolve their reservations in the ensuing years in light of their obligations under the BTWC and the CWC. For a very detailed discussion of these reservations and source of references see Nicholas Sims, op. cit, (1992), 477-479.

international community expressed outrage at Iraq's use of chemical weapons during the 1980s against Iraq and especially against Kurdish civilians, but took no punitive action against Iraq. Mere prohibitions on the use of these weapons are not enough; the temptation to ever use these weapons again must be eliminated.

Nevertheless, the Geneva Protocol was an important agreement which acted as a model for the present Chemical Weapons Convention. It was certainly more comprehensive than previous treaties; it managed to close the loopholes allowing the use of poisonous gases and the means to deliver them. As an added act of foresight, bacteriological weapons were also added to the prohibition. Although these weapons were not considered as much of a threat at that time as they now are, the negotiators of the Protocol took the opportunity to ban a future viable weapon. The most important attribute of the Geneva Protocol was the precedent and international standard it set against the use of chemical weapons. The Geneva Protocol also enjoys an enduring legacy. It has devolved into customary international law, binding on all parties regardless of whether they are signatories or not.[17]

Chemical weapons disarmament issues were debated during both the League of Nations' Preparatory Commission for the Disarmament Conference (1926-1930)

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16 Geoffrey Best, War and Law Since 1945, (Oxford: Oxford University Press, 1994), 308.

17 See Adam Roberts and Richard Guelff, (eds.) Documents on the Laws of War, (Oxford: Oxford University Press, 1982), 139, and N.P. Smidovich, "Limitations on Chemical and Biological Weapons", in Paul Stephan and Boris Klimenko, (eds.), International Law and International Security Military and Political Dimensions, (New York: M.E. Sharpe Inc., 1991), 127.

and the actual Disarmament Conference of 1932-1936.[18] As a result of all these discussions, a British draft text on the prohibition of the use of chemical, biological and incendiary weapons was introduced with an unconditional prohibition on biological weapons. Measures for a commission to investigate the violation of these provisions were also included. Although this draft text was adopted as a basis for a future Convention, no further agreements were reached, and in 1936 any future conferences on the issue were indefinitely postponed.[19] Although the Geneva Protocol was the only tangible measure emerging from this period, these other negotiations were important because serious thought was given to the complexities of restricting and abolishing chemical weapons. These very issues would resurface decades later in the negotiations for the Biological and Toxin Weapons Convention (BTWC), and the Chemical Weapons Convention (CWC).

The issue of chemical weapons disarmament lay mostly dormant for another three decades until the 1950s and 1960s when the United States was criticized heavily for not ratifying the Geneva Protocol, and for using herbicides and riot control agents in the Vietnam conflict. A focus on U.S. practices brought the issue of chemical arms control back on to the international agenda. This debate continued in the UN General Assembly and the Conference on the Committee on Disarmament (the predecessor of the Conference on Disarmament). Among the

[18]A variety of issues were explored at the conference. The first area of contention dealt with definitional problems—for example, what should be considered as a chemical weapon. There also were questions as to whether prohibitions should be imposed on chemical weapons preparedness, especially in peacetime. Additionally, should chemical weapons facilities be dismantled? What type of verification would be needed and how could prohibitions be enforced against transgressors? Should biological weapons be prohibited? See Van Courtland Moon in Burns, (ed.), 664-668.

many resolutions passed was the stipulation that riot control agents and herbicides should be considered chemical weapons under the Geneva Protocol, despite the steadfast opposition of the United States.[20] During the Nixon administration, the Geneva Protocol was sent back to the Senate for ratification although no change had occurred in the U.S. position regarding pesticides and riot control agents. There was still dissension between the United States and the international community. But by 1975 the Ford administration reached a compromise between the administration and the Senate, and the Geneva Protocol was finally ratified with the provision that herbicides and riot control agents be subject to "specific restraints."[21] It is perhaps not surprising that interest and action on chemical arms control took so long to come to fruition. The bickering over a comprehensive definition of chemical weapons took almost fifty years to resolve.

In addition, and running parallel, to these discussions was the creation of substantive bodies to deal with disarmament issues. In 1968, the U.N. Disarmament Commission added the question of chemical and biological weapons to its agenda and inaugurated a study on the topic in 1969. The British

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[19]Ibid., for a more detailed account of the issues and the reasons why the Disarmament Conference did not go any further.

[20]Although these agents were not traditionally considered chemical weapons, they were still perceived to be in violation of the Geneva Protocol because they were chemical agents. The United States maintained that herbicides and riot control agents were not covered under the Geneva Protocol. Indeed, the United States was the only permanent member of the UN Security Council at the time not to have ratified the Protocol, and actually withdrew the Protocol from Senate consideration in 1951. See Flowerree, op. cit., in Burns (ed.), 1001.

[21]The U.S. Senate did not want to endorse an agreement if it was perceived to include pesticides and riot control agents as chemical weapons. Thus the compromise of 'specific restraints' meant that the military would renounce the first use in war of riot control agents and pesticides with the exceptions of use against vegetation around the immediate perimeter of U.S. bases and institutions. And riot control agents would only be used in defensive military capacity to save lives. Under Executive Order 11850 of 8 April 1975, President Ford confirmed the new U.S. policy. See Flowerree op. cit., in Burns, (ed.),1005, and Frits Kalshoven, "Arms, Armaments and International

government presented to the Disarmament Committee in Geneva the option of separating chemical weapons from biological weapons on the disarmament agenda. This was complemented by a draft convention on biological weapons. The Western states felt that as chemical weapons disarmament issues were so complicated, more time and effort would be needed to reach agreement on them.[22] Because biological weapons were viewed as so impractical and horrific, an agreement to ban them would be relatively straightforward. The Soviets opposed this de-coupling and introduced their own draft Convention. The issue of separating the weapon systems was split down East-West lines. In the newly named Conference of the Committee on Disarmament (CCD), the Eastern Bloc finally changed its negotiating position and acquiesced by negotiating a biological weapons treaty only. The CCD Draft Convention was submitted to the UN General Assembly in December 1971 and the BTWC entered into force in 1975. The issue of biological weapons, by disarmament standards, had been swiftly dealt with, leaving the path clear for concentrating on chemical weapons. It was realized later that the treaty contained serious loopholes as a result of the rush to conclude the treaty. In the last few years, negotiators from the states parties to the Convention have had to reconvene in Geneva to work out complicated verification measures to be included in the treaty. The BTWC also does not contain any penalties for violators and few provisions for compliance, except for some

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Law", in Recueil Des Cours, Collected Courses of the Hague Academy of International Law, (The Hague: Martinus Nijhoff Publishers, 1986), 269.

[22]One of the theories about why it was difficult to move beyond the no-first-use pledge of the Geneva Protocol concerned the deterrence issue. Although it was argued that the lack of preparation as well as the marginal utility of chemical weapons prevented their use in World War II, it was also because of the fear of retaliation. No side wanted to be attacked by chemical weapons again, and with advances in aerial technology chemical weapons could be used against homelands as well as on battlefields. Thus, it was thought that if states at least held on to a

consultation and co-operation between states. Although the BTWC bans transfers of biological agents it has no measures to prevent proliferation.[23] Control measures relating to biological agents have been placed under the auspices of the Australia Group.

Section 4.1.1-The Negotiating History of the CWC

The next period in CWC development was the inclusion of chemical weapons disarmament on to the Conference on Disarmament agenda and the negotiation of the CWC proper, which lasted almost 20 years. Unlike the BTWC, this was not to be an expedited process, as various draft conventions filtered in and out of the disarmament committees. It was not until the middle of the 1980s when the political atmosphere had improved between the main protagonists, the United States and Soviet Union, that serious negotiations started. As a further impetus, the use of chemical weapons by Iraq during its war with Iran, and the spectre of use during the Gulf War demonstrated the pressing need for a chemical weapons ban.[24]

By 1984, the Conference on Disarmament convened with the mandate to cease exploratory consultations and focus its energies on negotiating a final chemical weapons ban.[25] The United States' insistence on retaining a two percent stockpile until all states had signed the Convention continued to impede the drive for a

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retaliatory capability then at least they were protecting their own security. See SIPRI Yearbook 1993, 710.

[23]Chevrier, 74.

[24]See SIPRI Yearbook, 1993, 713, for a discussion on the various chronology of initiatives; see also Flowerree in Burns, (ed.), 1011-1013. For a concise chronology, see ACDA, "Chronology of Events Leading to the Signing of the Chemical Weapons Convention", Factsheet, January 5, 1993.

complete ban. Originally, this stipulation was introduced by France, which also prompted controversy within the Western states. France argued that it was an important security concern to all states that small stockpiles be maintained; if there were any breakouts, states would still have a limited chemical weapons retaliatory capability. Later, however, this claim was renounced.[26] During the U.S.-Soviet bilateral chemical disarmament negotiations, the U.S. also dropped this requirement.[27] This was the key turning point in the drive for a complete ban. It is debatable whether other states would have been as committed to the ideals of a chemical weapons ban if the main chemical weapons states did not give up all their weapons. The U.S. interest in commencing a binary weapons chemical weapons programme also seemed contrary to the goals of a truly multilateral CWC. Ultimately, the U.S. also conceded on this point. The most glaring bone of contention impeding a comprehensive ban was the issue concerning the right to use chemical weapons in retaliation, as permitted under the reservations of the Geneva Protocol. The U.S. position advocated that during the chemical weapons destruction period it should have the right to retaliate if attacked by chemical weapons.[28] Eventually, this precondition was also dropped. It would have been rather difficult to convince states to subscribe to the altruistic goals of a CWC on the complete prohibition on use, production, stockpiling if certain states were not willing to guarantee their non-retention, non-use, or abstention from using

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[25]SIPRI Yearbook, 1993, 714-715.

[26]Elisa Harris, "Chemical and Biological Arms Control", in F. Hampson, H. Von Riekhoff, and J. Roper, (eds.), The Allies and Arms Control, (Baltimore: The Johns Hopkins University Press, 1992), 92.

[27]For a discussion of the U.S.-Soviet arrangements, see Chapter 3.

[28]Harris, op. cit., in Hampson, et al., 93.

chemical weapons. In other words, such an exception would have meant that the CWC was no improvement over the Geneva Protocol of almost seventy years past.

By 1992, the final stage of the proposed Convention was in place. President Bush then requested a one year deadline to a final Convention. The final stumbling block to be dealt with was the issue of "anywhere, anytime inspection". During the 1980s, this was seen as an attempt to promote the seriousness of verification measures; however, the impracticalities of such a measure became apparent and this provision was replaced with managed access verification.[29] On September 3, 1992, the CD officially completed work on the CWC and it was opened for signature in Paris in January of 1993.

Section 4.2-The Main Points of the CWC: What it Does and How it Works

> As the first post-Cold War arms control agreement, the Convention fits its time and its context....First, it is a multilateral treaty among equals. It was authentically negotiated in the international community—between developed and developing nations alike—not forged between two superpowers and presented to the rest of the world for endorsement. Multilateralism is a central feature of the Post-Cold War security environment....The world has said we want not just to control these weapons, but to destroy them—to put the genie back in the bottle and incinerate the bottle....To make them [chemical weapons] is a waste; to keep

[29]Due to the dual-nature of most chemical agents, it was felt that the only way to make verification effective was to have unimpeded access to facilities without right of refusal. Originally, the positions were drawn strictly across East-West lines. The Soviet Union thought such a measure would be an open invitation to spying. Yet by the late 1980s, the Soviets changed their stance and accepted the concept. Now it was the U.S. which hesitated, fearing that this measure might compromise sensitive institutions. Thus, managed access became the compromise solution. Under its main provisions, the inspectors could still be given access to any suspected installation, but the host would have the right to take measures to remove sensitive information or equipment. See Jessica Eve Stern, "Co-operative Security and the CWC: A Comparison of the Chemical and Nuclear Weapons Non-Proliferation Regimes", in Contemporary Security Policy, Vol. 15, No. 3 (December 1994), 32-33. Also see Arms Control Today, interview with Ambassador Stephen J. Ledogar, "The End of Negotiations", October 1992, 8-9.

> them an affliction; to use them an abomination. To champion their destruction makes us at once more exemplary, more civilized and more secure.[30]

The basic scope of the Convention is embodied under Article I (General Obligations) which prohibits the development, production, acquisition, retention, stockpiling, transfer and use of chemical weapons; it also requires the destruction of chemical weapons and facilities as well as those a state may possess on another state's territory. In order to accomplish this task, members must submit declarations on their chemical weapons holdings and destruction plans.[31] Under Article VI, the civilian chemical industry is also obligated to submit to on-site inspections and verification measures to prove that its activities are in accordance with the provisions of the Convention. Through a verification annex, chemicals are divided into three different schedules, each according to the levels of utility for making chemical weapons. Declarations are required from the facilities producing such chemicals, and different levels of verification will be required through on-site inspection for these schedules.

The CWC also includes incentives for states to join the Convention. Article X, Assistance and Protection against Chemical Weapons, requires parties to provide assistance to other states parties who are facing, or are under a chemical weapons assault. This can take the form of establishing a voluntary trust fund to provide the

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[30]Remarks taken from the address by John Holum, Director of U.S. Arms Control and Disarmament Agency to a seminar on the Chemical Weapons Convention sponsored by the Center for Strategic and International Studies (CSIS), Washington, D.C. March 31, 1994, 6-8, (Hereafter, CSIS Seminar).

[31] The CWC requires the destruction of all chemical weapons within ten years after entry into force (EIF) of the treaty. A five year extension is possible only if agreement is given by the Executive Council of the Organization for the Prohibition of Chemical Weapons (OPCW) as well as final approval by the Organization's Conference of States Parties. See ACDA, "Eliminating Chemical and Biological Weapons", Annual Report to Congress, 1994.

equipment for chemical defence, arranged assistance measures, or a declaration on the type of assistance it may provide in the event of an appeal for help or some combination of these. Next, there is Article XI, Economic and Technological Development, which is designed to encourage the exchange of technical knowledge in the chemical industry between parties in compliance with the Convention. It is important to note that while this Article offers economic incentives for states parties to join, there are significant penalties for those who remain outside the regime. For example, states which are not parties will be prohibited from receiving transfers of Schedule I chemicals. Three years after EIF of the CWC, chemicals on Schedule II will be banned from transfer to non-parties. In this intervening period, non-parties will also be required to submit end-user certificates specifying the details and purposes of the sale and transfer. Schedule III transfers would also require such certification. After five years of EIF, the question of whether further restrictions should be placed on Schedule III schedules will be considered by the states parties.[32] As a result, non-parties will be isolated from the technical and economic benefits of the international trade in chemicals.

Article XII, Measures to Redress a Situation and to Ensure Compliance, Including Sanctions, includes measures for enforcement and compliance when there has been a violation of the CWC. At the lowest level of compliance, upon the recommendation of the Executive Council, the Conference of States Parties may "restrict or suspend the State Party's rights and privileges under this Convention until it undertakes the necessary action to conform with its obligation under this

Convention." (Article XII, para. 2) For more serious infractions of this Convention, collective action under the auspices of international law may be taken against the transgressor. For the most serious infractions, the matter may be referred to the UN General Assembly or Security Council for further action. Within the treaty itself, there is a built-in promise that violations will be met with specific and firm responses.

A treaty as complicated as the CWC also requires some solid and precise implementation measures both at the national and international levels. National implementation measures are covered under Article VII. This Article requires states to enact domestic legal legislation to prohibit activities banned under the Convention, as well as impose penalties on those who break the law. The second part of the Article relates to national co-operation with the international body responsible for implementing the Convention. Each state party is required to establish a national authority as a liaison with the Organization for the Prohibition of Chemical Weapons (OPCW) and other states parties. As a good deal of technical and commercial information is being exchanged between various bodies, confidentiality is a key factor in the national implementation of this treaty. For an international treaty to be successfully implemented, there must be international co-operation, and for international cooperation to take place national cohesion is paramount.

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[32]Lee Feinstein, "CWC Executive Summary" in Arms Control Today, October 1992, CWC Supplement, 4 and interview with Dr. Ralf Trapp of the OPCW's Verification Bureau (November 1994).

Most crucial to the successful implementation of the treaty is the international body charged with overseeing and administering the requirements of the treaty. The international organization established under Article VIII is the Organization for the Prohibition of Chemical Weapons (OPCW), located in The Hague, the Netherlands. The OPCW is composed of the Conference of States Parties, the Executive Council and a Technical Secretariat. The main decision making body of the OPCW is the Conference of States Parties which is responsible for the implementation of the treaty. As its title indicates, this body is composed of the signatories to the Convention. Once the Convention is implemented, only those states which have ratified the Convention will be entitled to partake in the decision-making process. The Conference is to meet annually with the option of holding special sessions if necessary, and has a mandate to debate any issues which fall under the scope of the Convention. All states parties are accorded one vote each in any decision-making process.

Next, there is the Executive Council which is composed of 41 of the states parties at a time, rotating on a geographic basis. Within each geographic grouping, the states with the most significant chemical industries are given a percentage of the membership of the Executive Council. The Executive Council reports to the Conference of States Parties. The mandate of the Executive Council is summed up under Article VIII, Sect. C, para. 31:

> The Executive Council shall promote the effective implementation of, and compliance with, this Convention. It shall supervise the activities of the Technical Secretariat, cooperate with the National Authority of each State Party and facilitate consultations and cooperation among state parties at their request.

The last organ of the OPCW is the most important. The Technical Secretariat is the operational body that carries out the physical work of the Convention. While providing administrative and technical support to the OPCW, the main function of the Technical Secretariat is to implement verification procedures. The main unit of the Secretariat is the Inspectorate. This section of the OPCW has the enormous task of deciding how inspections are to be carried out, including the training of staff to execute them, and to process technical information in a manner ensuring confidentiality. The success or failure of the verification implementation of the CWC depends on the effectiveness of this unit.

The verification provisions of the CWC are extremely complicated and extensive, but are ultimately the most important. The CWC's verification regime sets it apart from other arms control treaties. Jay Brin highlights the uniqueness and challenge of this regime:

> Proponents and critics of the CWC agree that ensuring compliance will require massive, costly, and intrusive monitoring. Treaties limiting nuclear or conventional weapons call for inspections only of government owned installations. The CWC by contrast, applies to an estimated 25,000 commercial facilities worldwide that produce, process, or consume chemicals with both civilian and potential military uses—plus a virtually unlimited number of sites where clandestine warfare-agent production might occur....The quantities of chemicals needed to manufacture a military significant weapons stockpile would be lost in the background noise of international trade. On-site inspections of chemical weapons plants will therefore be essential. Indeed, verifying the CWC will require more on-site inspections than all previous arms control treaties put together.[33]

Appended to the main treaty text is the Annex on Implementation and Verification. This Annex describes the procedures involved for destroying chemical weapons: routine inspections of the civil chemical industry, challenge inspections, and investigations into use or alleged use of chemical weapons.

In accordance with Article III of the CWC, states parties must declare their stockpiles of chemical weapons and their facilities, with detailed plans for destruction. Once these declarations have been completed, the Verification Bureau will inspect these declared sites. This is the major transparency focus of the Convention. In addition, the Verification Bureau may also carry out inspections of storage and destruction sites. These will be routine inspections designed to ensure that data submitted by a state party on these facilities is accurate. These inspections will also be implemented against commercial chemical industry plants. Not only does the CWC give inspectors the right to regulate and question the chemical activities of its members, but it also "...ties the intrusiveness of routine monitoring to the risk associated with various toxic chemicals.[34]

For example, the three levels of schedules each require different levels of investigation. Schedule I agents rarely have any industrial uses due to their toxicity and are the primary precursors for chemical warfare agents. Schedule II and III agents could be used to make chemical weapons or the chemical precursors for such weapons. Schedule II agents are used in rather small quantities in commercial industries, but Schedule III agents have a far wider commercial application.[35] If the threshold for production, processing, consumption and import/export of Schedule I agents is over 100 grams, then the manufacturing facility must be

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[33]Jay Brin, "Ending the Scourge of Chemical Weapons", Technology Review, April 1993, 35.

[34]Amy Smithson, "Implementing the Chemical Weapons Convention", Survival, Vol. 26, No. 1, Spring 1994, 82.

[35]Ibid. and Stern, op. cit., (1994), 32.

declared. Schedule II reporting requirements range from 1 kg to one metric ton. Schedule III chemicals can go up to thirty metric tons. [36] What this means is that Schedule I and II facilities will be required to draw up "Facility Agreements"[37] with the OPCW on how the site is to be inspected. Schedule III facilities will be subjected to random selection for routine inspections. There will also be no more that two inspections per year, per plant site.[38]

The next level of verification measures are "Challenge Inspections". Challenge inspections are designed to detect possible cheating under the CWC. During the negotiations, there was discussion of "anywhere-anytime" verification with no right of refusal. This was modified in order to reach a compromise agreement acceptable to all parties. It was felt that sensitive facilities would be opened up to unnecessary snooping by other states. Thus the concept of "managed access" in challenge inspections was introduced. This provision still contains no right of refusal but the inspection must be carried out under particular guidelines. The

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[36]It must be noted that these are threshold amounts and vary according to the type and quantity of chemical agent involved. States parties are also allowed to produce an amount of one metric ton of Schedule I chemicals for research, medical, and pharmaceutical and defensive purposes. In practical terms, this means research into protective gear and antidotes. See Smithson, op. cit., (1994), 83, and Richard Guthrie, "The Chemical Weapons Convention: A Guide" in J.B. Poole & R. Guthrie, (eds.), Verification 1993, Verification Technology Information Centre, (London: Brassey's, 1993), Chapter 3. Also see Annex on Implementation and Verification of the CWC, especially Part VI, VII & VIII: "Activities not Prohibited under this Convention in Accordance with Article VI".

[37]Facility Agreements refer to the basic code of conduct between the Inspectorate and the facility being inspected. It is an agreement to rules of procedure on how the Inspectorate inspects the site in question. The Verification Annex, Part VII, "Activities not Prohibited Under this Convention in Accordance with Article VI", deals with Schedule 2 chemicals. Under Inspection Procedures, para 24, *"A facility agreement for the declared plant site shall be concluded not later than 90 days after completion of the initial inspection between the inspected State Party and the Organization unless the inspected State Party and the Technical Secretariat agree that it is not needed. It shall be based on a model agreement and govern the conduct of inspections at the declared plant site. The agreement shall specify the frequency and intensity of inspections as well as detailed inspection procedures, consistent with paragraphs 25 to 29."*

Inspectorate cannot simply demand access to sensitive facility and look around anywhere it so chooses. Under managed access provisions:

> [T]he inspected State Party shall have the right to take such measures to protect sensitive installations and prevent disclosure of confidential information and data not related to chemical weapons. [Some of the more important measures include the following:]
> (a) Removal of sensitive papers from office space;
> (b) Shrouding of sensitive displays, stores, and equipment;
> (e) Restriction of sample analysis to the presence or absence of chemicals listed in Schedules 1, 2, and 3 or appropriate degradation products;
> (f) Using random selective access techniques whereby the inspectors are requested to select a given percentage or number of buildings of their choice to inspect; the same principle can apply to the interior and content of sensitive buildings; (Part X of the Verification Annex of the CWC, "Challenge Inspections Pursuant to Article IX", Conduct of Inspections, Managed Access, para 48, p. 158) [39]

The rules of procedure for challenge inspections are designed to strike a harmonious balance between the needs for secrecy and transparency in questionable activities. But more important than the procedural aspects of a challenge inspection is the process by which one is instigated, and the time constraints involved before the inspection can actually take place. The request by a state party to the Executive Council of the OPCW for a challenge inspection should not be considered a frivolous matter. States are encouraged to try to resolve compliance issues between themselves before taking official action. Therefore, prior to an official request for a challenge inspection, a request can be made to the Executive Council to clarify an ambiguity, or the suspected state may be asked to clarify a questionable activity. Once an official request for a challenge inspection has been submitted, the Executive Council must, within twelve hours and by a three-quarter majority, decide whether the inspection request will be

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[38]See Stern, op. cit., (1994), 34, and Verification Annex of CWC, Part VIII, 136. & Part VIII, 142.

granted. Then, the Director General must inform the inspected party within twelve hours that an inspection will take place. Finally, the physical inspection must take place within 120 hours of notification.[40] Thus, under very controlled circumstances, the inspection team will be dispatched to collect and analyze information to determine whether a violation has occurred.

The final section of the verification component of the CWC is the investigation into the actual use of chemical weapons. Any investigation required to determine use would mean that verification measures designed to halt the production or possession of chemical weapons have already failed. Under the provisions of Part XI of the Verification Annex, Investigations in Cases of Alleged Use of Chemical Weapons, a state party must submit an official request for an investigation by the Director General and include as much information as possible concerning the circumstances of the alleged incident. The Director General will then notify all other states parties as well as the Executive Council. The Director General shall then select an inspection team from a list of experts; usually this can be drawn from the same list of experts who conduct challenge inspections. Additional members may be assigned if other types of expertise are required. Usually, the inspection team is to be dispatched within 24 hours of a request. If there are any

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[39]Please note that this is not the complete list of managed access provisions, only the main points.

[40]These time delays concern the fact that the two parties need to establish a perimeter area (at the site or facility) to be searched at the point of entry (of the state party's territory). If the initial perimeter is not acceptable, an alternative perimeter area must be designated. In all cases, the inspectors must be transported to the suspect site within 36 hours of arrival. The inspected party is supposed to provide prompt access to the installation or at least to the alternative perimeter once at the site. At the actual site, the inspected party is to agree on provisions for the final perimeter, but if agreement still cannot be reached at this point, and before a time span of 72 hours, the alternative perimeter shall become the final perimeter or searched area. (See Verification Annex of the CWC, Part X "Challenge inspections pursuant to Article IX and also R. Mathews, "Verification of the

delays, then the Director General is accountable. Once in the territory of the state party where the incident has occurred, the inspection team has the right of access to samples, interviews, hospitals, or to any area, person, or situation that may provide evidence of chemical weapons use. This type of verification activity is similar to a challenge inspection except that many more variables must be taken into consideration. It must be remembered that no action can be taken against violators until it can be proved that illicit use has occurred. Then it may be possible to investigate and ferret out stocks of suspected agents to find out where previous verification measures have failed.

Section 4.3-The CWC: An Analysis of its Strengths and Weaknesses

The CWC firmly establishes the abolition of chemical weapons as an international norm, which is extremely unique in modern arms control, as it seeks to rid the world entirely of a weapon of mass destruction. The CWC also supports chemical weapons disarmament with further non-proliferation measures as well as unprecedented verification and enforcement measures. As the treaty has not yet entered into force, it is not possible to take any position regarding its effectiveness as opposed to its proposed effectiveness.[41] Only time and circumstances will attest to the value of this Convention. Nevertheless, an analysis can be made about some of the treaty's structural inadequacies and strengths. The purpose of this

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Chemical Industry Under the Chemical Weapons Convention", in Poole & Guthrie, (eds.), op. cit., Chapter 5.

[41] Although the CWC is near to EIF, once it enters into force it would take some time to assess its effectiveness. It would not be an immediate result.

section is to critique the CWC as it now stands, which may offer some indication of its future effectiveness.

Initially, for a treaty to be successful, it must be universal, non-discriminatory, and open. States must also ratify and implement this treaty without delay so that the treaty has order and purpose. If these basic functions are not fulfilled, then no matter how comprehensive and well-meaning a treaty is, it will never be truly viable. Whatever the altruistic goals of the treaty, they will not come to much if the treaty is not widely subscribed to. The CWC also offers positive incentives for states to join, such as the prospects of technology access and protection from chemical weapons attack. If the treaty did not offer such "carrots", it is doubtful it would be successful in attracting membership. States have to see that it is in their own interest to join or, at the very least, that it is not contrary to their interests. Similarly, the CWC contains "sticks" to make states which do not join reconsider their position. If states do not join, their access to specific chemicals which are important for the lucrative international chemical trade would be withdrawn, dealing a serious economic blow to a state wishing to build up a competitive and multinational chemical industry. In the international community there would be political and economic costs for not becoming members of the regime. As the Convention establishes an important legal norm, those who remain outside the regime would be considered as pariahs.

The CWC is also non-discriminatory, as every part is equal. Every member must abide by the same rules; there is no two-tiered system like the Nuclear Non-Proliferation Treaty (NPT), in which some states can have these weapons and

other cannot. All parties also have the same rights under the CWC. In addition the CWC contains extensive openness and transparency measures. Every state is required to declare its stocks of chemical weapons and open its commercial facilities to intrusive inspections by an outside body. By making transparency detailed and mandatory, the CWC requires states to lay bare their chemical weapons larder in order to reassure other states that they are not retaining the chemical weapons option. Openness is considered a sign of trust, and trust entails reciprocity.

While the CWC encourages universality and equality, a state still cannot actually be forced to join the Convention. Furthermore, "if chemical weapons are outlawed, only outlaws will have chemical weapons."[42] Sub-state actors, involved in terrorist activity as evidenced in the Tokyo chemical weapons attack, do not honour the belief that the use of these weapons is especially reprehensible or, indeed, even care about the political risks of their use. Their objective is simply to instil terror and seek attention for their own agenda. The good news is that at the initial signing ceremony in Paris in January 1993, some 130 states signed the Convention, including many states from areas of tension, or states that are suspected to have chemical weapons. The Director of the U.S. Arms Control and Disarmament Agency (ACDA), John Holum, has optimistically pointed out that "it is important that three quarters of the 25 countries identified as having a

[42]Brin, 34.

chemical weapons potential have signed the CWC. We want them to ratify as well, and ultimately to attain universal adherence."[43]

Some of the states which have not signed as yet and are causing concern are the following: Angola, Egypt, Iraq, Libya, North Korea, Somalia, Syria, and Taiwan.[44] The main area of concern for acceptance of the CWC remains the Middle East. Not only is this an area of high tension and strategic value, but it is also the area where the most recent incidents of chemical weapons use has occurred. The so called "Red Sea Gang " wanted their signing of the CWC to be linked to Israel signing the NPT. The feeling in this part of the world is that if these states are willing to give up a weaker security option such as chemical weapons, then Israel should show some good faith and sign the NPT.[45] States in this area of the world also feel that their security could be compromised if the CWC were to be used as a spying mechanism. There is the fear that challenge inspections could be used to spy on nuclear programmes. A hypothetical example would be Israel demanding a challenge inspection of a facility in Syria, not because it particularly believes that illicit chemical weapons activities are taking place, but because it suspects that some sort of nuclear programme is being developed.[46] Similarly, this situation could also be applied in the reverse as Israel also has the same fear of inspectors spying under a false pretext.[47] But as Jessica Stern points out, the verification

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[43]See ACDA, "Statement of the Honorable John Holum, Director U.S. Arms Control and Disarmament Agency before The Committee on Foreign Relations", United States Senate, Official Text, March 22, 1994, 2.

[44]Smithson, op. cit., (1994), 90.

[45]James Leonard, "Rolling Back Chemical Proliferation", Arms Control Today, October 1992, 16.

[46]Interview Rybka, also see Jessica Eve Stern, "All's Well That Ends Well? Verification and the CWC", in Poole and Guthrie, (eds.), Chapter 4.

[47]Leonard, 16.

annex is supposed to protect against frivolous inspections; certain parts of facilities may be shielded, and not all chemical weapons detection equipment can pick up signs of nuclear development.[48] While the CWC does offer these protective measures, it still remains a problem for the universality challenge as long as states perceive that some of their sovereignty and security rights might be breached. A combination of diplomatic cajoling, regional peer group pressure as well as economic pressures would all be used to bring outsiders into the regime. The fact that all parties are held to the same standards, unlike with the NPT, may give some moral high ground to diplomatic and peer pressure. If the major states do not accede to the treaty, then political pressure would be hollow. Finally, if any states wish to have input into the chemical weapons regime on an equal standing with any other state, then they must become members. At least on paper, the CWC contains enough political and economic incentives to support universality.

Gaining ratification of the treaty has been a difficult and slow task. It is important to remember that some non-signatories may yet ratify it and that some signatories may stall ratification. The treaty enters into force (EIF) 180 days after the 65th instrument of ratification has been deposited. The earliest EIF date for the CWC was January 1995. Delays in ratification have extended this process to 1997. The delay is partly attributed to the fact that states are hesitant to ratify until the holders of the largest chemical weapons stockpiles, the United States and Russia, accede to the CWC. According to Ian Kenyon, the Executive Secretary of the OPCW, "...many countries had completed their internal ratification procedures but were

[48]See Jessica Eve Stern, "All's Well that Ends Well? Verification and the CWC", in Poole and Guthrie, (eds.), op. cit., Chapter 4.

waiting for the United States and Russia, the world's biggest declared holders of chemical weapons to take the lead."[49] It is extremely important that the key states behind the treaty ratify the CWC. While it is not technically required that these two states ratify the CWC, if they do not, smaller states may wonder why they should relinquish their use of a particular weapon while larger states retain theirs. To not ratify the treaty would be inconsistent as both the United States and Soviet Union played a major part in initiating and then negotiating the treaty. More important, the United States will also be responsible for a large share of the costs of the OPCW.[50] A CWC without the U.S. and Russia would be a hollow exercise and probably not even viable.

Ratification delays mean that the treaty cannot be operational. If ratification does not take place in a timely fashion, the urgency, credibility and importance of the treaty will be called into question. While the CWC has acknowledged limitations, the final product is still a strong, cohesive, and detailed treaty which embraces a multitude of concerns. The co-operation between differing states in facilitating this Convention is truly a historical achievement; to lose it through domestic dissension would truly be a historical dereliction. More important, it is possible that the enthusiasm for this treaty will wane if the momentum is not seized with timely ratifications. Michael Moodie also cautions that:

> ...[I]t is essential to continue to move aggressively on CWC ratification and implementation—and to get implementation right once it begins. If momentum flags, it could undermine enthusiasm for the convention and the international norm it is intended to create. It could also diminish enthusiasm for multilateral arms control as an important approach to dealing with international security

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[49]Reuters, "Chemical Weapons Agency sees treaty by end-1996", 18 October 1995.

[50]The U.S. stockpile is 30,000 metric tons while Russia's is 40,000. See Amy Smithson, "Dateline Washington: Clinton Fumbles the CWC", Foreign Policy, Summer 1995, 172.

> problems, souring the experience in such a way that further pursuit of multilateral arms control would hold little attraction.[51]

If there is enough international consensus to sign this treaty, then it seems inconsistent that states are so hesitant in their ratification processes. Ratification is the concern of each state's domestic political structure where internal debates examine the costs and benefits of the treaty before agreement. This is where the arms control diplomats take their case to the politicians for debate:

> Due to a facet of treaty law designed to protect democratic procedures and controls, the signature of an emissary of a state on a treaty does not become binding until endorsed in a process of national ratification. In the United States as in other democracies, the legislative body must express its consent before ratification can be carried out. With more than 150 signatories to the Chemical Weapons Convention (CWC) since its opening for signature in January 1993, the process leading to ratification therefore ensures a nearly global parliamentary and public debate....Thus, in the United States, as in many other countries, the discussion of chemical disarmament is no longer limited to narrow group of specialists.[52]

Some states simply may have more elaborate bureaucratic processes than others, may be undergoing political turbulence, or simply have such a daunting portfolio of other matters to consider. As a result, arms control is not given precedence. In the case of the United States, a combination of bureaucratic processes and domestic politics and a considerable caseload as a world leader has slowed down the process. Arms control agreements almost always face a laborious process in the U.S. Congress. It would seem that this debate should be made easier as the United States is already committed to destroying its chemical weapons stockpile. Therefore, it would also seem logical that those debating the CWC in the Senate would not question the reason and importance of the CWC. As Amy Smithson argues, "by all accounts, except for a handful of Cold War critics, the Convention

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[51]Michael Moodie, "Evaluating the CWC in the Post-Cold War Security Context", in Roberts, (ed.) op. cit., (1994), 17.

is a commonsense deal."[53] It is no longer a debate about the utility of chemical weapons. Thus, it would seem reasonable that the treaty should not encounter too many stumbling blocks to ratification. As the director of ACDA, John Holum, points out, "...if we failed to ratify the CWC, and it did not enter into force, we would lose the benefit of having other countries legally obligated to eliminate weapons that we have chosen to renounce for ourselves."[54]

There are a variety of reasons why those responsible for the legislative process wish to debate the merits of the CWC: economic costs to the U.S. (e.g., in a time of shrinking budgets is it really worth the money to be part of this treaty?); effects on the chemical industry; risks to the environment; and risks to the security of both the United States and the international community. One of the more contentious issues involved, at least in the U.S. ratification process, is the suspicion that Russia will not or cannot honour its promises. It is feared that:

> Russia's chemical stockpile poses a menace similar to "loose nukes". Security conditions at Russia's chemical storage sites, lax compared with those at its nuclear facilities, have deteriorated since the collapse of the USSR. Instability in Russia has made this arsenal quite vulnerable to abuse or theft.[55]

Another problem critics cite is the perception that the treaty is not verifiable. Most of the Senate's experiences with arms control treaties have lead it to distrust the Soviet Union's compliance record. Verification issues for the CWC are different

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[52]Roberts, op. cit., (1994), 116.

[53]Amy Smithson, "Get Moving and Ratify the Chemical Weapons Convention", *International Herald Tribune*, 18 June 1996, 8.

[54]See John Holum, "The CWC: Time for the Harvest", remarks to an American Bar Association (ABA) Seminar on Implementing the CWC, February 7, 1995, 3, (Hereafter, ABA seminar).

[55]Smithson., op. cit., (1995), 181.

from those of nuclear weapons; and past experiences in the field of nuclear arms control cannot necessarily be applied to chemical weapons.[56]

In addition, as there was no real forceful public relations campaign promoting the treaty, it was feared that the Senate would take its time in debating the key issues, allowing more prominent domestic concerns to take precedence. There has also been criticism of the Clinton administration for being slow to transmit the treaty to the Senate and not being aggressive enough either in promoting the treaty, or in taking the time to educate the Senate as to the pros and cons of the treaty. The crucial issue here is that domestic promotion and education are paramount to the ratification process.

Domestic squabbling in Congress has also hindered the process. In 1994, ten hearings were held in both houses of Congress but this fell to zero in 1995 when the Chairman of the Senate Foreign Relations Committee, Senator Jesse Helms, blocked movement on arms control treaties in Congress to ensure a review of the foreign affairs agencies. Under a "unanimous consent agreement", however, the administration has agreed to review the standing of the foreign affairs agencies within a six-month period. In return, Senator Helms must hold up to four hearings on the CWC, and a floor vote must be taken by April 30. As soon as possible, former Senate Majority Leader, Bob Dole promised to submit the CWC to the Senate for full ratification. The Clinton administration has also promised to

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[56]Ibid., 174-175. Smithson traces the routing of the CWC when it first went down the path to ratification. While taking time out to criticise the foreign policy of the Clinton she is accurate in her assessment that as the CWC represented a new step in arms control, more educating should have been done on its behalf.

promote the CWC more enthusiastically by enlisting the services of its most senior foreign affairs staff to testify on the CWC's behalf.[57] Perhaps a hopeful sign was that Congress ratified Start II on 26 January 1996. Thus, it was thought likely that the CWC would be ratified by mid-1996. Unfortunately, the prospect of this happening is diminished and EIF will probably not occur for another year.[58]

Recently, it has also seemed that Russia has been dragging its feet on arms control agreements. It is interesting to note that the U.S. Senate Foreign Relations Committee included in its Resolution for ratification of the CWC binding conditions and non-binding declarations concerning Russian commitment to the destruction of chemical weapons.[59] The U.S. has agreed to help both financially and technically with the Russian destruction programme but unease still remains. Indeed, political instability in Russia is worrisome vis-à-vis the stability of maintaining arms control agreements, as it is feared that more contentious issues in Russian politics will get in the way of progress of the CWC. Peter Herby observes that:

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[57]Information on this process was supplied from an enquiry to Kate Rodriguez of the Bureau of Intelligence, Verification & Information Management, U.S. ACDA, researched through its Congressional Affairs Liaison Office. Also see Arms Control Today, December 1995/January 1996, 28.

[58]Update. Although the Senate Foreign Relations Committee did approve on 25 April 1996 a resolution for ratifying the CWC, Senator Dole never presented the treaty to the full Senate before he left Congress. (Thus, any prospects for ratification must wait until Congress reconvenes after the summer recess). Without the United States and Russia on board, the work of the OPCW may be held in abeyance. By mid-June 1996, there were still only 53 ratifications deposited. Sixty-five are needed for entry into force of the CWC. See Heather Podlich, "Senate Foreign Relations Committee Passes CWC Ratification Resolution", Arms Control Today, April 1996, 21, and author's conversation with Kate Rodriguez of ACDA (June 1996).

[59]The binding conditions concerning Russia include: presidential certification that Russia has completed the data requirements of the U.S.-Soviet Wyoming Memorandum of Understanding and a report on any Russian discrepancies in the data; and that the U.S.-Russia Bilateral Destruction Agreement will be concluded and that verification mechanisms are up to par with that of the CWC. Declarations include that in exchange for U.S. financial assistance, Russia must destroy its

> In the Russian Parliament, fierce opposition is focused on both environmental and financial considerations....Moreover, the destruction program is not a high priority item for Russian legislators currently involved with a number of hotly contested political and economic issues....[60]

Notwithstanding the technical, financial, and political problems in Russia, upon completion of the signing of the CWC, it did appear that the Russian ratification process was following the same path as that in the U.S. The Duma committee charged with overseeing the ratification process submitted a plan to President Yeltsin soon after the signing of the CWC and commenced hearings on the matter on March 24, 1994. This was parallel to developments in the United States, where the Senate had begun hearings two days earlier. More hearings were also scheduled for later that year. In another sign of Russian commitment to the CWC, its representatives were also very active in the work of the Preparatory Commission of the OPCW.[61] The bureaucracy of the intergovernmental decision-making process itself also presents problems.[62] Although the political will appears to be present, technical problems combined with bureaucracy are delaying the process. The Russian debate on this issue was once again delayed by Parliamentary elections in December 1995, but the Director General of the OPCW was assured that ratification would take place by Spring 1996. That date was then moved up to after the June Presidential elections. As of June 1996, however, ratification still seems to be in abeyance. Russia is well aware of the political consequences of remaining outside the regime. It would lose its right to

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stockpile at a proportional rate to that of the U.S. and inform the relevant committees of any Russian non-compliance. See Podlich, op. cit., (April 1996), 21.

[60]Peter Herby, "Building the Chemical Disarmament Regime", Arms Control Today, September 1993, 18.

[61]Report on Demonstration of Russian Commitment to Comply with Three Agreements on Chemical and Biological Weapons, From The White House to the Honorable Robert C. Byrd, Chairman, Committee on Appropriations, United States Senate, October 1, 1994, 4.

representation at the OPCW after extensive participation in the Preparatory Commission. In addition, much-needed financial aid and technology to destroy its chemical weapons stockpile would be jeopardized.

Another problem relating to ratification is the question of implementation, as the ratification debate often centres on this. As Michael Moodie observes:

> A major challenge to those in the arms control community is to shift their focus from the "fun" of arms control negotiation to the "drudgery" of arms control implementation. In the years ahead, the latter will be as, if not more, important than the former, and priorities must shift accordingly. The CWC provides a critical test case of how well that transition can be managed. [63]

It is an important issue because if the treaty is not implemented properly at the outset then the chance of success is already weakened. Two possible implementation problems facing the CWC are set out by Brad Roberts: finding the most effective way to physically dispose of chemical weapons stockpiles while maintaining safety in the environment; and the implementation of the reporting and declaration requirements of the chemical industry.[64] The hazards of chemical weapons destruction are really only relevant to the states with major stockpiles to destroy. But it is a sensitive issue. The United States has been working on environmentally safe destruction issues for some time and is actively collaborating with Russia on this matter. In terms of industry, the chemical industry took part in the negotiations, its constituents were consulted, and indeed the industry supported the CWC. Without the chemical industry's co-operation in the first place, it is doubtful whether the CWC would have been so cohesive. Nevertheless, for

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[62]Ibid.

[63]Moodie, op. cit., in Roberts, (ed.), (1994), 16.

smaller companies the requirements of CWC verification may appear daunting. John Holum admits that:

> The CWC will impose some additional costs on U.S. companies. Producers, processors, and consumers of certain chemicals will have to file required declaration forms and host on-site visits by international inspection teams. But these costs should be modest—particularly if affected firms plan carefully in advance. Those taking part in practice on site inspections and reviewing draft declaration forms are finding that complying with the CWC requirements will be manageable within the normal scope of activities.[65]

Although Holum is implying that the CWC does place additional constraints on industry, given industry's previous co-operation and consultation and practice runs, the process should not be too rough. A further incentive for U.S. companies to support the ratification of the CWC is the economic costs to industry if the U.S. does not ratify. They would be frozen out of the chemical trade and as Amy Smithson argues:

> Chemical industry leaders have warned the Senate that their overseas customers will begin switching to suppliers in states that have ratified the treaty. The Senate's postponement of a vote will have a negative impact on a $60 billion U.S. export business and the jobs associated with it.[66]

The same problem would also be applicable to the chemical industries in other states if their governments do not ratify the CWC.

Finally, there is the fear that the national authorities will not fullfill their obligations accordingly once the CWC enters into force. As Peter Herby warns:

> [M]any states have neither established national implementation mechanisms or educated their own bureaucracies about the eventual demands the CWC will place upon them, in terms of planning, material and financial resources.[67]

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[64]Roberts, op. cit., (1994), 119.

[65]See John Holum, ABA Seminar, 4-5.

[66]Amy Smithson, op. cit., (1996), 8.

[67]Herby, 17.

Domestic requirements will cut across the military (defence), the political (foreign affairs), the penal (justice), the commercial (industry), and commercial-government (trade or commerce departments).[68] While some states may face these problems, they are not insurmountable. It is simply a matter of co-ordinating their own national bureaucracies. States may also have another incentive to harmonize their national policies. After the Tokyo chemical weapons subway attack, the fear that a non-state actor could gather enough resources for a chemical attack became all too real. If Japan had tighter laws and penalties in place at the time of the Tokyo gas subway attack, the Tokyo subway attack probably could have been prevented. The good news is that the international implementation body, the Preparatory Commission of the PTS of the OPCW, has managed to work out procedural matters and structures which bodes well for effective EIF. Hopefully, national measures will be able to "piggyback" off this body. Herby also praises the achievement of the Preparatory Commission thus far as:

> Discharging all these tasks on time would challenge even the most efficiently run corporation: achieving these goals within an international organization composed of 147 squabbling governments many with conflicting interests beyond the scope of the CWC requires extraordinary political skill and the ability to create a sense of common purpose in the endeavour.[69]

The most important aspect of the CWC once it is operational and widely subscribed to, is its verification and compliance measures. If a treaty has enough loopholes, no verification procedures, or weak compliance mechanisms, then the treaty is not worth the paper it is written on, and will be operationally useless in the real world. According to Jessica Stern:

> The CWC sets a number of important precedents in this regard. It is the first arms control treaty since the (never implemented) Baruch Plan of 1946 to

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[68]Ibid.

[69]Ibid., 15.

> contain explicit wording on collective sanctions against violators, and its inspections will be far more intrusive than any other arms control treaty adopted so far.[70]

The only way to ensure that the obligations of the treaty are being met is to verify them. The purposes of verification in such a regime are to detect and to deter parties from cheating. The CWC is considered to have the most extensive verification provisions ever afforded a treaty, and "...establishes new standards in multilateral arms control and disarmament treaties in terms of the depth, extent and intrusiveness of verification provisions."[71]

Although the CWC's verification measures have been applauded, critics of the CWC claim that it is impossible to verify because the chemical industry is too large, too many chemicals are of a dual-use nature, and those determined to cheat simply will not declare their caches of chemical weapons. In response, the proponents of the treaty have never claimed it would be perfect nor indeed one hundred percent verifiable. Peter Van Ham acknowledges that:

> There can be little doubt that the CWC is not—and never will be—100 per cent watertight: determined proliferators will always be able to manufacture chemical weapons. However, it can be argued that the CWC provides significant verification procedures which deter cheating, and that its mixture of verification, confidence-building measures, assurances and sanctions may go a long way in encouraging states to abandon this category of weapons.[72]

John Holum, the Director of ACDA also shares this opinion that "While no treaty is one hundred percent verifiable, the CWC will substantially increase the risk of

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[70]Ibid.

[71]Robert Mathews and Timothy McCormack, "Prevention is Better than Cure: Pre-empting Inspection-Related Disputes under the Chemical Weapons Convention", Contemporary Security Policy, Vol. 16. No. 3, 9 December 1995, 38.

detection and hence deterrence."[73] In other words, the CWC places very firm obstacles in the way of chemical weapons proliferation; they are not perfect, but they are still very strong.

How difficult is it for determined actors to cheat and bypass verification controls? The easiest and most obvious way of cheating is simply to not declare facilities or stockpiles at the outset of the process. The only way to discover a clandestine programme or stockpile is through human intelligence, although sometimes technical intelligence data can also make inspectors suspicious. Peter Van Ham argues that:

> [I]nspection teams will want to know where to look in the first place. Detailed and reliable intelligence will be essential for the OPCW's operation, but it is not at all clear how it will obtain the information to enable it to decide which facilities warrant inspection. A computer database will be established in The Hague comprising information provided by member states. The OPCW will, however, not have an independent information-gathering network. This might prove a significant lack, since apart from controlling declared chemical production facilities, undeclared stock and covert production must also be discovered.[74]

It is all very well to have the right to inspect suspect facilities, but first they must be located. As Kathleen Bailey contends: "If a suspicious signatory country demands a challenge inspection, the illicit activity at the site will almost surely be discovered. But how would the facility be pin-pointed for inspection?"[75] The sheer abundance of facilities on a global scale which require inspection may over-stretch inspection teams, leaving little time for effectively policing suspect facilities.

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[72]Peter Van Ham, "Controlling missiles, and chemical and biological weapons", in T. Taylor and R. Imai, (eds.), The Defence Trade, Demand, Supply and Control, (London: Royal Institute for International Afairs, 1994), 81-83.

[73] John Holum, CSIS lecture, 4.

[74]See Van Ham, op. cit., in Taylor and Imai, (eds.), 82.

[75]Kathleen Bailey, "Problems with a Chemical Weapons Ban", Orbis, Spring 1992, 243.

Chemicals designed for legitimate purposes may also be diverted and used for illicit activities. Accounting errors, spillage, mismeasurement, evaporation, and falsification of records may also make it difficult to trace renegade chemicals.[76] There is also the possibility that new chemical agents could be produced in separate facilities set aside for defensive research.[77] It was recently alleged by two Russian scientists that a more toxic nerve agent had been developed despite their government's claim that its chemical weapons activity had been terminated.[78] Most states, however, have chosen to develop the traditional chemical agents, because the creation of new ones requires extensive research and development. Although the development of new agents may prompt concern, it remains a small risk owing to the extensive development costs of such a project. As an added safeguard, the CWC schedules of chemicals can be updated and revised to accommodate any threatening, new innovations.

Cheating may also present a problem for challenge inspections. For example, owing to the time delays involved, a cheater may have adequate time to stall and cover his tracks. According to Dr. Ralf Trapp of the OPCW's Verification Bureau, in the worst case scenario, it would take inspectors about five days to gain access to the facilities, during which time a stockpile could be removed. Also, an inspection request made to the Director General could be leaked, giving states advance warning that a challenge inspection will be forthcoming.[79] Through the Director General's use of diplomatic channels and the filing of official documents,

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[76]Ibid., 242, and Van Ham, op. cit., in Taylor and Imai, (eds), 81.
[77]Bailey, 242.
[78]Brin, 35.

the accused state could gain advanced warning, and therefore may be able to hide any evidence.[80] The crux of the matter is that no state party is going to be blatant or indeed foolish enough to leave an exposed trail of evidence for inspectors to find. Instead, inspectors will have to search for tell-tale evidence that illicit chemical weapons activities have taken place or have been hidden. For example, a site that was also engaged in illicit activities would have special, and distinctive, design features and storage facilities for this purpose. It probably is not as easy as some would argue to reconvert these facilities before an inspection takes place.[81]

It is has also been alleged that a "cheater could hide illicit chemical production in the midst of other chemical-industry activity even when allowing the overall facility to be inspected."[82] During the challenge inspection, the cheater could declare off limits certain areas which may house suspect equipment, materials or activities. Basically, there are a variety of opinions as to what can be hidden, disguised, or removed before a challenge inspection. Nevertheless, if the inspectors are trained properly, they should be able to ferret out the necessary evidence. Unfortunately, time delays and devious behaviour may give the advantage to the determined cheater. As Jay Brin argues:

> On balance, the CWC may give too much control to the inspected party, who is under no legal obligation to cooperate fully. Uncooperative or even deceptive behaviour, like that of Iraq toward the U.N. nuclear inspections teams after the Gulf War, would be permitted within the letter—though not the spirit of the treaty. To make it more difficult for a violator to hide the evidence, it would be

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[79]Interview with Dr. Ralf Trapp of the OPCW's Verification Bureau, conducted 11 November 1994, The Hague.

[80]Connie Rybka, U.S. Army Assistant for Negotiations, Under-Secretary for Defense. Interview conducted at the Pentagon, 24 July 1995.

[81]Interview Dr. Ralf Trapp.

[82]Bailey, 241.

> better to have access to a suspect site within 48 hours (rather than 120 hours) after a challenge inspection has been announced.[83]

Brin makes a relevant point about shorter notice in inhibiting cheating, but more importantly, he warns that non-co-operative behaviour would not necessarily place the inspected party in violation of the treaty, and could conceivably encourage such behaviour.

The only genuine example of how intrusive verification procedures are conducted in the real world is the UNSCOM operation in Iraq. These unprecedented verification and inspection activities may have some fundamental applications for the CWC's verification regime. Until the CWC is fully operational and is called upon to conduct a challenge inspection, this is the only documented example as to how verification activities can be conducted against a state suspected of proliferation.[84] It must be cautioned that the CWC inspection regime is designed to be much less intrusive than the UNSCOM operation in Iraq. Rod Barton makes the distinction that:

> Even the most rigorous inspections under the CWC will be much less intrusive than those allowed by UNSCOM under Resolutions 687 and 707. Thus under the CWC, the site to be inspected is to some extent negotiable with the state party and the inspectors will be restricted to the site, which will be precisely defined.[85]

It is also important to note that the UNSCOM operation was forced upon Iraq as part of a wider security and disarmament mandate following the Gulf War, but the

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[83] Brin, 40.

[84] Trial inspections have also been conducted, but they were simply practice runs.

CWC is a multilaterally negotiated and freely agreed-to set of obligations. While the UNSCOM operation was more intensive than that of the projected CWC, "...UNSCOM inspectors (still) noted these anomalies during routine inspections without the need to resort to the special powers granted to them".[86] Therefore, even without the highly intrusive verification of the UNSCOM operation, the CWC inspections should be able to catch any irregularities. But, it should be remembered that even with all of UNSCOM's powers, Iraq still managed to continue an illicit weapons programme and mislead investigators. Perhaps the real test of the proposed CWC's verification regime's value is whether it would have produced the same results as the UNSCOM operation in Iraq. Rob Mathews acknowledges that if the CWC had been in place at the time of Iraq's activities, the "verification provisions of the CWC would have been sufficiently effective to indicate that Iraq was producing and using chemical weapons (but not necessarily the extent of the violation)...."[87] An important caveat to remember in this argument is that Iraq is a worst-case scenario. It is a risky policy, politically, for most states to risk world-wide condemnation by hiding their illicit chemical weapons programmes. The major flaw in this regime, however, is the simple fact that a state may ultimately choose to remain outside the regime. One could argue that the states which have either unilaterally renounced chemical weapons or acceded to the treaty are those most unlikely to use them in the first place, but

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[85]Rod Barton, "Chemical Weapons Inspections in Iraq: Verification Implications for the Chemical Weapons Convention", Working Paper No. 131, (Canberra: Peace Research Centre, June 1993), 14-15.

[86]Ibid, 16. What Barton is saying is that although the CWC verification inspectors may not be able to gather detailed information about militarily significant quantities of chemical weapons with the powers they now have, they would still be able to find enough evidence to report back to the OPCW Executive Council.

[87]Robert Mathews, "Verification of the Chemical Industry Under the Chemical Weapons Convention", in Poole and Guthrie, (eds.), Chapter 5.

those that remain outside the regime may not have any reservations about doing so. The CWC's verification machinery cannot force a party outside the treaty to accept intrusive verification. Any forceful measures would have to be placed under a mandate or operation such as UNSCOM.

It is not always possible to verify use. As Dr. Trapp points out, it is often difficult to pin-point the exact location of an attack, and due to their properties, certain agents may have already dissipated by the time an inspection team arrives. If the state party formulating the request has been attacked by chemical weapons, it would obviously be in its own interest to co-operate fully by giving complete access to its own sites and records. When the investigators need to track the source of a chemical weapons attack, problems may arise if they need access to the territory of a non-state party. According to Part XI of the Verification Annex, Investigations in Cases of Alleged Use of Chemical Weapons, Para. E-27, States Not Party to This Convention, the "Organization shall closely cooperate with the Secretary-General of the United Nations". This is the only recourse states have when claiming a chemical weapons attack. There are also serious complications when a non-state party uses chemical weapons on its own territory, as was the case of Iraq's attack against the Kurdish population. Verification proves difficult because the right of access becomes embroiled in political problems. Thus, while the verification provisions of the CWC are not perfect, they are extensive and strive to cover various contingencies.

Chapter V

The Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects (CCW).

The Convention on Conventional Weapons or the Inhumane Weapons Convention depending on one's preference, is a unique treaty in many respects. Although it has often been described as an international humanitarian law treaty, it is in fact a curious blend of international humanitarian law and arms control. IHL is the most prevalent component of the treaty, but the CCW also seeks to restrict the use of specific weapons systems. This is in contrast to the general IHL provisions regulating the means and methods of warfare, which since the 1925 Geneva Protocol had not focused upon specific weapons. The CCW has not been widely recognized as an arms control treaty either; perhaps this impression is sustained because the treaty emanated from the United Nations rather than through the bilateral arms control process, or the Conference on Disarmament. Because the treaty was negotiated in a multilateral milieu during the Cold War era, it was not accorded much stature or attention while superpower politics and bilateral agreements occupied centre stage. The purpose of this section is to examine the precedents for humanitarian controls on weapons; the history and motivations which brought about this treaty; the main points, strengths and weaknesses of the treaty; and the prospects for success in making it stronger through the review process.

Section 5.1-Precedents for Restricting or Prohibiting Weapons on Humanitarian Grounds.

The aspiration to prohibit weapons based upon their perceived inhumanity is not a 20th century phenomenon. Attempts to declare certain weapons illegal go back to antiquity.[1] Some of these attempts are of limited significance while others serve as important precedents. Specific restrictions on weapons started to appear when the law of war was being codified in the last century. These restrictions also occurred as part of the wider peace process. The 1868 St. Petersburg Declaration was not only one of the first agreements codifying the laws of war but it also produced the first international agreement to prohibit a specific weapon with the "Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight". The Declaration was designed to prohibit a new innovation in explosive bullets. The Russian Army had developed bullets to explode on hard contact, specifically to blow up ammunition wagons. Later, a similar but smaller bullet was invented which exploded on contact with a soft surface like human tissue, causing grievous bodily injury. This new development was strictly anti-personnel in nature, and did nothing to enhance the original military utility of the weapon. Moreover, the Russian government was uneasy about other parties acquiring the technology for a new weapon system. Logically, once a weapon was widely deployed, it would also be very difficult to convince

[1] For example, Polybius, an ancient Roman historian, wrote of the outlawing of "secret missile weapons" (such as spears, stones, and arrows) by the ancients because they were not an open means of combat. The Carthage-Rome Peace Treaty (202 B.C.) and the Peace of Apamea (188 B.C.) decreed that the losing side had to relinquish its trained war elephants and not use any more in the future because they caused panic amongst troops. In the 12th century, church leaders of the Second Lateran Council issued a decree prohibiting the use of crossbows against Christians. Although this prohibition was enacted on humanitarian grounds, in reality, there was a fear that the crossbow gave the common foot soldier and enemy a strategic advantage over the mighty knight. Crossbows could effectively pierce the knight's armour and make him more vulnerable. See

other states to rescind their deployment. Thus, it made sense to prohibit this weapon before it could be widely dispersed.[2]

It is important to note that the parties involved agreed to a weight of 400 grams as the dividing line between the more anti-personnel rifle bullets and the larger artillery.[3] It is also where the line is drawn between military necessity and humanitarian concerns. The larger artillery munitions could certainly disable a large number of combatants and inflict disabling injuries during the course of action to overcome fortified positions. Their military utility was therefore too important to yield to humanitarian considerations, and their destructiveness to combatants was a secondary effect of the weapon. In contrast, the smaller rifle bullet wounded an opponent far more extensively than was strictly necessary to incapacitate him.[4] As a result, these bullets were banned on the basis that the suffering they caused were disproportionate to their military effects. Proportionality regulates the balance between military necessity and humanity, and as G.J. F. Van Hegelsom argues:

> While the effect of incendiary or explosive bullets for the purpose of wounding one man only would be considered disproportionate, as soon as the projectile

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Richard E. Burns, (ed.), Encyclopedia of Arms Control and Disarmament, (New York: Charles Scribner's Sons, 1993), 1366-1367.

[2] Ove Bring, "Regulating Conventional Weapons in the Future—Humanitarian Law or Arms Control", Journal of Peace Research, Vol. 24, No. 3, 1987, 276.

[3] Frits Kalshoven, "Arms, Armaments and International Law", Recueil des Cours, Collected Courses of the Hague Academy of International Law, Vol. II, 1985, (Dordrecht: Martinus Nijhoff Publishers, 1986), 207.

[4] According to the St. Petersburg Declaration, "...the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy; [therefore], ...this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men, or render their death inevitable;" See Text of the Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight as reproduced in Dietrich Schindler and Jiri Toman, (eds.), The Laws of Armed Conflict A Collection of Conventions, Resolutions and Other Documents, 3rd ed., Henry Dunant Institute, (Dordrecht: Martinus Nijhoff Publishers, 1988, 101-102.

could affect more than one, the balance between military necessity and humanity would effectively be restored.[5]

Finally, although the Declaration only prohibited the use of these weapons, production of these bullets ceased as a consequence of the total and effective prohibition on their use.[6]

The St. Petersburg Declaration, however, did not rid the world of injurious bullets. A new manifestation of an excessively injurious bullet was to be found in the so-called "dum-dum" bullet which became the subject of prohibition at the Hague Peace Conference of 1899. Although the effects of these bullets on humans were as injurious as the projectiles prohibited under the St. Petersburg Declaration, the British government argued that as the bullets were neither explosive or inflammable, the prohibition was not applicable.[7] The Hague Declaration (IV, 3) supports the customary principle prohibiting the use of weapons which cause unnecessary cruelty and states that, "Contracting parties agree to abstain from use of bullets which expand or flatten easily in the human body, such as bullets with a hard envelope which does not entirely cover the core or is pierced with incisions."[8]

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[5] G.J.F. Van Hegelsom, "Conventional Means and Methods of Warfare and the Law of Armed Conflict—Prospects for Further Restrictions and Prohibitions", Humanitäres Völkerrecht, Informationsschriften, Nr. 4, Oktober 1991, 175.

[6] Although there was no legal agreement to ban the production of these weapons, production was discontinued voluntarily— a rather unusual outcome in arms control. Had these weapons merely been restricted instead of prohibited, a cessation of production would have been unlikely. See Ove Bring, op. cit., (1987), 276.

[7] Hilaire McCoubrey and Nigel White, International Law and Armed Conflict, (Aldershot: Dartmouth Publishers, 1992), 252.

[8] See Declaration (IV, 3) Concerning Expanding Bullets as reproduced in Schindler and Toman, 109.

At the next Hague Peace Conference in 1907, the emphasis switched to concerns about naval rather than land warfare. The purpose of the 1907 Hague Convention VIII Relative to the Laying of Automatic Submarine Contact Mines was to limit the damage mines caused to neutrals and non-combatants both during and after combat. In this case, the issue at hand was the indiscriminate nature of the weapon rather than its inherent cruelty. Although there were proposals tabled for a total ban, a lack of support prevented this from occurring. Instead, simple restrictions were placed on these mines. Article 1.1 of the Convention states that it is forbidden "To lay unanchored automatic contact mines, except when they are so constructed as to become harmless one hour at most after the person who laid them ceases to control them."[9] The significance of this Convention is the recognition of the dangers that these mines posed to civilians due to their indiscriminateness. This same logic would be applied over 70 years later in the case of land mines. But like naval mines, there was not enough support from the major powers to completely ban them, because they served a military purpose. Indeed, with the exception of the 1925 Geneva Protocol, this Convention was to be the last attempt until the 1970s to restrict or ban a weapon that was either inhumane or indiscriminate, or whose use was seen to contravene humanitarian principles.[10] But it should also be pointed out that there were no comparable prohibitions on existing categories of weapons in the arms control field either.

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[9]Adam Roberts and Richard Guelff, (eds.), Documents on the Laws of War, (Oxford: Oxford University Press, 1982), 86, and Burns, (ed.), op. cit., 1502.

[10] The Washington Treaty on the Use of Submarines and Gases in Wartime (1922) was never ratified. But some of its main points do reflect the thinking of the time with regards to both security and humanitarian concerns. The invitation to the Conference which produced this treaty stated that " It may be found advisable to formulate proposals by which in the interest of humanity the use of new agencies of warfare may be suitable controlled." See A. Thomas and A.P.V. Thomas, Legal Limits on the Use of Chemical and Biological Weapons, (Dallas: Southern Methodist University Press, 1970), 63.

Section 5.2-The History Leading up to the Conventional Weapons Convention

During the height of the Cold War, the superpowers and their respective blocs were more concerned with engaging in an arms race than with actually reducing their armaments. Still, new developments in the weapons race made it rapidly apparent that war was becoming more destructive and indiscriminate, raising warning signs in both the arms control and humanitarian law arenas. Specifically, the extravagances and widespread publicity of the Vietnam conflict led to renewed calls for restraint. The Vietnam conflict, though brutal and long, was probably no more horrific than any other war, but the fundamental difference was that it was heavily televised around the world.[11] A variety of conventional weapons were causing concern, including incendiary weapons such as napalm, fragmentation weapons, cluster bombs and small-calibre weapons.[12] It was on napalm that attention was primarily focused, as it seemed to be the most dramatic type of weapon. The problems of land mines were not ignored, but initially, they did not have the same terrifying and dramatic effect of napalm.[13] Today, that situation has been reversed due to the widespread publicity of the land mines crisis.

At the XXVI session of the UN General Assembly, Resolution 2852 was passed, calling for the Secretary General to submit a report on napalm and other incendiary weapons. This was submitted to the XXVII session of the UN General

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[11] Kalshoven, op. cit., (1986), 225, and Geoffrey Best, War and Law Since 1945, (Oxford: Oxford University Press, 1994), 296-297.

[12]Kalshoven, op. cit., (1986), 225.

[13]Best, 299. In addition, land mines were abused by all sides, and therefore were not as controversial ideologically.

Assembly.[14] Once the UN began looking into these matters, the 1970s ushered in various conferences on the reaffirmation of international humanitarian law and the effects and perceived humanity of certain weapons. In 1971, under ICRC sponsorship, the Conference of Government Experts on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts was convened, with a second session following in 1972. While examining prohibitions on specific weapons was not part of the official mandate of the Conference, certain proposals were raised by some groups on these weapons. Initially the ICRC restrained itself from any official stand, as the organization felt that these discussions belonged in the sphere of the UN or disarmament forums. Later, however, the ICRC modified its position with the understanding that if no other consideration was given to these weapons, it would investigate the possibility of looking further into the matter.[15] But critics of the ICRC position felt that discussions on these prohibitions, because of their humanitarian nature, belonged in the IHL forum. At the second session, the ICRC was requested by 19 governments to supervise a study by legal, military, and medical experts on the use and effects of possibly inhumane weapons. The ICRC acted promptly, and a report was produced the following year (1973).[16] Although the report was intended for purely descriptive purposes and was not an outcome of the intergovernmental process, it did lay the groundwork for future conferences, and advocated the controversial viewpoints that were to come.

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[14]See Maurice Aubert, "The International Committee of the Red Cross and the Problem of Excessively Injurious or Indiscriminate Weapons", International Review of the Red Cross, No. 279, November-December 1990, 480.

[15]See Kalshoven, op. cit., (1986), 228, based upon the commentary of a representative at the Conference as referenced in Conference of Government Experts on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, Second Session, 3 May-3 June 1972, Report of the Work of the Conference, Vol. 1, (Geneva: ICRC, 1972), para. 3:4.

The next important conference on the agenda was the Conference of Government Experts on the Use of Certain Conventional Weapons held in Lucerne, Switzerland in 1974. There was also a follow-up Conference held in Lugano in 1976. At the Lucerne Conference, delegates discussed the all-important legal criteria or "measuring sticks" to be applied to the use of conventional weaponry. These included the concepts of unnecessary suffering, superfluous injury, indiscriminateness, and treachery or perfidy, all in relation to delayed action weapons.[17] At the next Conference held in Lugano in 1976, France, the United Kingdom and the Netherlands introduced draft proposals on mines and booby-traps which firmly distinguished these weapons as the main objects of focus for the future weapons conference.[18]

Although these Conferences had no law-making authority, and were under the organizational umbrella of the ICRC, they were very important because of wide attendance by numerous technical experts and official representatives from all the major powers. The Conferences were significant because they symbolized the willingness of states to sit down and discuss seriously the problem and effects of such weapons. But as a member of the U.S. Delegation to the original CCW conference, explains:

> During the 1970s, the United States was not particularly desirous of concluding a weapons agreement and neither promoted nor opposed the multilateral negotiating process. This neutral position had been taken during the CDDH

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[16]Kalshoven, op. cit., (1986), 229-232, and Aubert, 480.

[17]See Brigadier A.P.V. Rogers, "The Mines Protocol: Negotiating History", in the ICRC Report, Symposium on Anti-Personnel Mines, Montreux, 21-23, April 1993, (Hereafter ICRC, Montreux Symposium), 228-229, and also Kalshoven, op. cit., (1986), 234-237 for a discussion on these issues.

[18]Rogers, op. cit., in ICRC, Montreux Symposium, 229.

> partly because of a widely shared skepticism about both the humanitarian aspects of some of the proposals advanced and the prospects for success in prohibiting or restricting conventional weapons....[19]

Although parties were now willing to look at ways to restrict conventional weapons, they still remained sceptical about the effectiveness of any restrictions. Since even formal arms control treaties may lack teeth, one could also wonder whether restrictions on weaponry based upon humanitarian principles might have even less substance.

Being convened (by the Swiss Government) in the same time period were the Diplomatic Conferences on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflict. Four sessions were held between 1974 and 1977 resulting in the adoption of the Additional Protocols to the 1949 Geneva Conventions. These conferences were concerned with improving the general rules of the law of war rather than dictating specific prohibitions on certain weapons, but their influence was important. As an offshoot of the Diplomatic Conference, the "Ad Hoc Committee" was established to study possible prohibitions or restrictions on conventional weapons. In sum, the *Ad Hoc* committee produced a total of four reports on the issues at hand, further adding to the body of knowledge needed for the final weapons conference.

The Diplomatic Conference also adopted Resolution 22, "Follow-up Regarding Prohibition or Restriction of the Use of Certain Conventional Weapons" which called for a Conference of Government Experts to reach agreements on restrictions

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[19]Captain J. Ashley Roach, "Certain Conventional Weapons Convention: Arms Control or Humanitarian Law?", Military Law Review, Vol. 105, 1984, 4.

or prohibitions on specific conventional weapons.[20] The UN General Assembly concurred with Resolution 32/152 of 19 December 1977, the green light for convening the weapons conference. As a result, two preparatory conferences were held in 1978 and 1979, and two sessions of the actual conference held in 1979 and 1980.[21] In October 1980, the Convention was completed along with its annexed protocols.

It is doubtful that the Weapons Conference would have taken place if states had not spent the intervening years mulling over the issues. As Brigadier A.P.V. Rogers argues:

> By the time of the first preparatory conference in 1978 of the Weapons Conference, considerable work on mines had been done. There was available the ICRC Report of 1973, the reports of the Lucerne and Lugano conferences, the four reports of the Ad Hoc Committee and a reasonably well developed text which formed the basis for discussion at the preparatory conference.[22]

Had it not been for these previous conferences, the conference dedicated to establishing the CCW would not have been as quickly negotiated. In the case of the Chemical Weapons Convention negotiations conducted in the Conference on Disarmament (CD), the nature of the weapon was not in question; otherwise there would not have been a move to negotiate the chemical weapons ban in the first place. In contrast, before there was even a Convention on Conventional Weapons, the types of weapons causing concern had to be identified, and then according to

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[20]Kalshoven, op. cit., (1986), 249-250.

[21]See Burris Carnahan, "The Law of Land Mine Warfare: Protocol II to the United Nations Convention on Certain Conventional Weapons", Military Law Review, Vol. 105, 1984, 75; Kalshoven, op. cit., (1986), 249-251; Ove Bring, "The 1981 Inhumane Weapons Convention", Disarmament, Vol. XIII, No. 4, 61; and William J. Fenrick, "The Conventional Weapons Convention: A Modest but Useful Treaty", International Review of the Red Cross, November-December 1990, No. 279, 501.

their nature and properties, restrictions or prohibitions were applied accordingly. The CCW was much more of a mélange than the CWC, which made the preparatory work carried out in the 1970s crucially important.

It is also interesting to note that once the mandate for the proposed Convention had been decided, it was not negotiated in an official disarmament forum. Initially, the Soviet Union wanted a prospective CCW to be negotiated at the Conference on Disarmament (CD). Hays Parks observes that if the prospective CCW was negotiated at the CD, it might never have resurfaced. For example, in the case of the Chemical Weapons Convention, it was only through major political pressure that the CWC was rescued from the CD after almost 20 years of negotiations. Therefore, it would be difficult to deny that states which were not in support of a CCW could have buried it or kept it floating around aimlessly on the CD agenda. But from another stand-point, placing land mines on the CD agenda would also show that this issue was important enough to warrant debate in a serious disarmament forum. Throughout history, states have been suspicious of any attempts to curtail their right to weapons, regardless of the forum in which they are negotiated. Although the CCW was not negotiated under the auspices of an official disarmament forum, Captain J. Ashley Roach cautions that:

> It should be noted that the negotiators involved in the CCW were, for the most part, not major players in CDDH [Diplomatic Conference on Humanitarian Law]. Indeed, the most remarkable feature of the CCW is that this "son of CDDH" was for the most part negotiated by arms control and disarmament personnel who had little or nothing to do with the development of the Additional Protocols. Indeed, this fundamental change in the members of the delegations probably accounts for many of the variances of the CCW treaty and its protocols....[23]

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[22]Rogers, op. cit., in the ICRC, Montreux Symposium, 233. To see the history of how the mines protocol evolved from Lugano to the Preparatory Conferences, see Annex A of the "Report on Land Mines", from the same symposium.

[23]Roach, 14.

Although the CCW was meant to be a IHL treaty, most states had arms control experts in attendance to assure that there were no excessive adjustments or restrictions placed upon their weapons policies.

Section 5.3- Major Provisions of the Convention on Conventional Weapons

In contrast to the long and drawn-out CWC, the CCW is by treaty standards quite short: eight pages of treaty text (the umbrella section) and three annexed protocols. States may not be party to the treaty without also being party to two out of the three protocols. Additional protocols on specific weapons can be added to the treaty as needed. The treaty was designed to be open-ended, allowing for any new developments. The preamble of the treaty sets out some basic humanitarian law principles: that the means and methods of warfare are not unlimited and parties are prohibited from using methods of warfare that would cause superfluous injury or unnecessary suffering (Paragraph 3). Paragraph 5 reiterates the custom that even in cases not covered by the Convention:

> ...[T]he civilian population and the combatants shall at all times remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from dictates of public conscience,...

The most unusual section of the preamble, which is often forgotten, is its reference to arms control and disarmament. Paragraph 7 and 9 state that the High Contracting Parties are:

> Recognizing the importance of pursuing every effort which may contribute to progress towards general and complete disarmament under strict and effective international control,...[and]

> Wishing to prohibit or restrict further the use of certain conventional weapons and believing that the positive results achieved in this area may facilitate the main talks on disarmament with a view to putting an end to the production, stockpiling and proliferation of such weapons,...

These clauses are important, as they recognize the benefits of disarmament in an international humanitarian law treaty. No disarmament measures were included in the actual treaty because such positions would not have been viable at the time the treaty was negotiated. Had supporters of the abolitionist camp insisted on including disarmament measures, it is doubtful that there would have been a treaty at all. Nevertheless, the notion that disarmament measures could be added at some later point was an important caveat that the treaty authors made sure to include.

The rest of the "umbrella body" is comprised of articles on scope, entry into force, and relations with other agreements. The scope of this Convention applies only to international armed conflicts rather than to domestic ones. Next, there are the three Protocols. The first is very brief: Protocol I on Non-Detectable Fragments states that "It is prohibited to use any weapon the primary effect of which is to injure by fragments which in the human body escape detection by x-rays". This is a very simple prohibition and the only Protocol that bans outright a particular weapon. Although such a weapon was conceivable in theory, there was no such weapon system in existence. Frits Kalshoven observes that "...the prohibition is in line with earlier prohibitions on use of conceivable but not really existing methods or means of warfare, such as the gas projectiles of 1899."[24] Technically speaking, some plastic mines may fit this category but the types of injuries inflicted by these mines are not the weapons' primary effect.[25] Although

[24]Kalshoven, op. cit., (1986), 252.
[25]Best, 298.

technology may catch up with some of these prohibitions, legalities may still render the prohibition irrelevant. Unless a specific weapon is named, any total prohibition will be hollow.

Protocol III on Prohibitions and Restrictions on the Use of Incendiary Weapons restricts the use of these weapons when civilians are at risk. There is no total prohibition on these weapons. Napalm is never mentioned by name, yet this was the incendiary weapon that stirred the most debate in the call for restrictions on horrific conventional weapons. As Hays Parks points out, "The legality of incendiary weapons was established without qualification....Regrettably, Protocol III will provide little, if any, protection for civilians caught up in such [internal] wars. "[26] Thus, napalm as an instrument of military necessity won the day over the humanitarian argument, although its use was to be subject to restraints.

The Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Protocol II) is composed of a set of restrictions and prohibitions designed to protect the civilian population from different types of land mines. In the original treaty, no actual mines were banned outright; rather, restrictions are placed upon their use. Article One and Two deal with scope and definitions. Article Three deals with general restrictions on mines and booby traps. Under Paragraph 2, "It is prohibited in all circumstances to direct weapons to which this Article applies, either in offence, defence or by way of reprisals, against

[26]Hays W. Parks, "The Protocol on Incendiary Weapons", International Review of the Red Cross, No. 279, November-December 1990, 550.

the civilian population as such or against individual civilians." The Article also prohibits the indiscriminate use of such weapons.

Article Four, Restrictions on the Use of Mines Other than Remotely Delivered Mines, Booby-Traps and Other Devices in Populated Areas, complements the general restrictions of Article Three with measures to protect the civilian population. It prohibits using these weapons against a populated area when combat is not imminent or occurring, unless the populated area is within the vicinity of the military objective of the opposing side, or if the civilians have been amply warned by signs and fencing. Article Five, Restrictions on the Use of Remotely Delivered Mines, prohibits use of these mines unless the area in question is a military objective or contains a military objective, and its location can be accurately recorded, according to Article Seven (see below). The prohibition is further excepted if a self-neutralizing device is fitted in the mine. In addition, advanced warning must be given on any deliveries affecting the civilian population unless circumstances do not permit it. The purpose of this Article was to restrict the widespread use of these types of mines because they could be scattered indiscriminately, without a record of their location.

Article Six, Prohibitions on the Use of Certain Booby-Traps reaffirms one of the customs in international law banning the use of perfidious weapons. The article describes how booby-traps can be attached to benign, sacred, or neutral objects in order to disguise a hidden danger within what is recognized as a safe object, place, or haven. For example—the dead or wounded, medical facilities, toys, and religious objects. The prohibition extends to using booby-traps which cause

superfluous or unnecessary suffering. Since booby-traps are not a major weapon system *per se* and are of a perfidious nature, restrictions against them elicited more support and co-operation from military establishments than from more utilitarian or traditional weapons systems.

Article Seven, Recording and Publication of the Location of Minefields, Mines and Booby-Traps was included because mines were used on such a large scale, that as a precautionary measure, it was deemed important to record their location. Parties to a conflict are obligated to record the locations of all pre-planned minefields they have laid. They shall also "endeavour to ensure the recording of the location of all other minefields, mines and booby-traps which they have laid or placed in position." Next, after the "cessation of active hostilities", parties shall retain their records to protect the civilians from the continual effect of mines. Each party shall make available to the other and the United Nations the records in their possession. The Article also requests that parties make such records available to UN forces in the area and release such records when making agreements to end hostilities. Article Eight, Protection of United Nations Forces and Missions from the Effects of Minefields, Mines and Booby-Traps is a very basic article requesting that the warring parties take the necessary measures to protect UN forces from land mines. Finally Article Nine, International Co-operation in the Removal of Minefields, Mines and Booby-Traps states that it is not enough simply to know where the minefields are; they must be rendered harmless, if the civilian population is to be safe. Thus the respective parties shall co-operate to remove them. Finally, the Protocol contains a technical annex on the Guidelines on Recording of the location of minefields.

Section 5.4-The CCW: A Critique

Unlike the Chemical Weapons Convention, the 1980 Convention on Conventional Weapons has been in force for over a decade, and thus it is possible to assess its relative value to date. It would be difficult to say that the CCW has made any appreciable difference. Senator Patrick Leahy observed that:

> When delegates to the Convention on Conventional Weapons (CCW) Review Conference gather in Vienna from September 25 to October 13, they will be seeking to improve an agreement so riddled with loopholes and exceptions and so lacking in enforcement procedures as to be virtually meaningless: the numbers of civilians maimed and killed by land mines continues to climb each year despite a specific CCW Protocol limiting land mine use.[27]

To be absolutely objective, by the time the CCW and its respective Land Mine Protocol came into effect, a good deal of the land mine damage had already been inflicted by the excesses of conflicts during the 1960s and 1970s. Still, the excesses of land mine misuse have continued to the present time. When the CCW was first negotiated, the issue of land mines abuse was not as desperate as it is today; thus the restrictions seemed adequate at the time. Perhaps this explains why the Protocol was not made stronger at the time of its original formulation. More germane is that placing these type of restrictions on weaponry was not popular, and compromises had to be made to appease the varying interests of many states. Sometimes, the political and military consensus to pursue a matter properly simply does not exist. A more cynical viewpoint is that states deliberately lobbied for

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[27]Patrick Leahy, "The CCW Review Conference: An Opportunity for U.S. Leadership", Arms Control Today, September 1995, 20. Senator Patrick Leahy, the ranking minority member of the Senate Foreign Operations Subcommittee of the Appropriations Committee is the main advocate and proponent in the U.S. establishment of a land mine ban and was the author of the U.S. Land Mine Moratorium and other legislation. However, his viewpoints are not necessarily those of, or the policy of the U.S. government.

restrictions in the vaguest terms, full of loopholes, in order to bury the issue. But issues have a habit of returning, and in the limelight they are hard to ignore.

Technological advances have also outpaced strategic concerns. For example, the Land Mines Protocol should be commended for placing some restrictions on remotely delivered mines (an emerging technology at the time) which were not then in as widespread use as they are today. But the drafters of the Convention did have enough foresight to envisage it as open-ended and allowed for further review, taking into account the future development and effects of weaponry. As the former Secretary General of the United Nations, Javier Perez de Cuellar acknowledges:

> Despite all the upheavals which have occurred since the Convention was adopted, it has retained all its relevance and validity. Designed as an open-ended treaty, with a scope for further protocols to be added to those included when it was adopted, there is no risk of future events making it obsolete. The authors of the Convention thus foresaw the need to adapt the Convention to changing circumstances.[28]

Precisely under the right-to-review mechanism of the treaty, France, as a party, made a formal request to the United Nations that a Review Conference be convened.[29]

The CCW importantly recognized that under international humanitarian law, restrictions on the use of specific weapons systems needed to be addressed. It stands as a rather historic agreement because states were at least willing to limit the use of conventional weaponry. As Jozef Goldblat argues:

> ...The Inhumane Weapons Convention [as the CCW has been called] may be regarded as an achievement, modest but significant, because in regulating the use

[28]Javier Perez de Cuellar, "Introduction", International Review of the Red Cross, No. 279, November-December 1990, 471.

[29]Under Article Eight of the Convention, a Review Conference may be held ten years after the treaty was ratified.

> of certain weapons in certain circumstances it has given precedence to humanitarian imperatives over military consideration.[30]

For the first time since the Geneva Protocol, states were willing to examine the humanitarian effects of their weapons in relation to their military utility. Even Richard Falk who is generally critical of Protocol II, admits that "The Landmines Protocol advances some laudable objectives, identifying land mines as requiring attention, as well as restating the customary international law duty to protect civilians from indiscriminate mine warfare."[31]

Although the treaty does establish some important precedents, it is a weak treaty, nonetheless. David Gowdey offers a realistic explanation as to why the treaty is worth improving:

> ...[W]e need to fix the Protocol because it is the only existing law governing the use of land mines. In its present state it is worthless. If we can put some teeth into it, it will save lives, perhaps lots of lives. It is not the solution to the problem, but rather a step along the way.[32]

Former Secretary General of the United Nations Boutros Boutros-Ghali aptly summarizes the failings of the CCW Land Mines Protocol this way:

> The land mines protocol is not applicable to internal warfare, and does not regulate the stockpiling, transfer, or export of antipersonnel mines. The conventional weapons convention also does not include any provisions for enforcement. There is no procedure to monitor compliance and no designated venue for lodging allegations of breaches. There is no method for seeking redress or cessation of unlawful acts and no penalty for the intentional or indiscriminate use of mines against civilians. Even if mines are laid according to wartime rules, the protocol fails to take into account the delayed impact of mines after a war ends.[33]

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[30]Jozef Goldblat, Arms Control: A Guide to Negotiations and Agreements, International Peace Research Institute, Oslo, (London: Sage Publications, 1994), 196.

[31]Richard Falk, "The Tightrope of International Humanitarian Law", in Kevin A. Cahill, (ed.), Clearing the Fields Solutions to the Global Land Mines Crisis, (New York: Basic Books & Council on Foreign Relations, 1995), 78.

[32] David Gowdey, then Demining Consultant to the UN Department of Humanitarian Affairs, correspondence with the author, February 8, 1995.

[33]Boutros Boutros-Ghali, "The Land Mine Crisis A Humanitarian Crisis", Foreign Affairs, September/October 1994, 12.

Perhaps one of the biggest failings of the Convention is that its scope does not apply to the internal armed conflicts, in which most of the indiscriminate land mine use typically occurs. Attempts were made to apply the Protocol to internal conflicts in the original negotiations but no agreement could be reached. The problem was that certain states considered this to be an infringement upon their national sovereignty.

If rules of conduct regarding the means and methods of warfare are applicable in international armed conflict, then there is no reason why they should not also be respected in internal conflicts. Although the specific circumstances may be different, war is war. Yves Sandoz eloquently sums up the moral argument for applying the same principles of war to internal conflicts:

> When children are blown up by land mines during non-international armed conflicts, the relevant legal provisions can—and indeed must—be examined and if necessary taken back to the drawing-board. But, morally speaking, States must be asked whether they can grant themselves the right in internal conflicts, to use methods against their own citizens which they have agreed to forgo in international armed conflicts.[34]

The problem with scope is two-fold. While the customary rules of warfare are applicable in all types of conflict, by limiting specific and more enforceable rules to international conflict, a very large loophole remains intact. Most present day conflicts are internal and it is difficult to say the least, to make both regular and irregular forces respect the rules of warfare.

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[34]Yves Sandoz, "The Question of Prohibiting or Restricting the Use of Certain Conventional Weapons", International Review of the Red Cross, No. 279, November-December 1990, 476.

Another problem with the CCW is its lack of implementation, verification and enforcement mechanisms.[35] As Frits Kalshoven notes:

> The student of the Weapons Convention finds in this instrument hardly any of those many and variegated devices and mechanisms designed to promote implementation, which are so abundantly available in the Geneva Conventions of 1949 and in Additional Protocol I of 1977.[36]

Proposals have been made to transfer some of the implementation mechanisms from other humanitarian law treaties. These would include the following measures: providing legal advisers in the militaries to instruct personnel on certain weapons; requiring that Armed Forces be trained in humanitarian law; translating the Convention into local languages and incorporating it into national laws; and establishing an international fact-finding commission. Additionally, a supervisory body could also investigate violations while at the same time serving to promote and implement the treaty.[37] Some sort of implementation body could serve as a central point of reference for all state parties. Fact-finding commissions and supervisory bodies could also be used as monitoring bodies. As land mine misuse is occurring at a rapid scale it is of paramount importance to have a means for centrally collating information, and for reporting on the violation situation.

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[35] There is one small exception to the lack of implementation in the CCW. Under Article Six, states parties are requested to disseminate information about the Convention in their own states and especially to their militaries. Unfortunately, this is only a very basic request and often tends to fall by the wayside, especially in the case of irregular forces.

[36] Frits Kalshoven, Constraints on the Waging of War, (Geneva & Dordrecht: ICRC & Martinus Nijhoff Publishers, 1987), 152.

[37] Yves Sandoz, "Turning Principles Into Practice: The Challenge for International Conventions and Institutions", in Cahill, (ed.), (1995), 187-188, and "The Rationale for Amending Protocol II of the 1980 Convention", *Group of Governmental Experts to Prepare the Review Conference of the States Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects*, Background Documentation prepared by the International Committee of the Red Cross, April 1994, Annex I, 23-24. (Hereafter ICRC, Background Document April 1994).

As part of the implementation procedures, demining requirements should be obligatory rather than voluntary.[38] Current treaty language contains only vague or polite requests to demine. If certain parties were made to take responsibility for the mines they laid, a large part of the land mine problem would be alleviated. As Tore Skedsmo trenchantly observes: "Mines seem to change ownership before and after they are buried. This is a strange thing. You bury them and somebody else owns the problem."[39] Knowing which party bears official responsibility for mine removal would facilitate implementation of the Convention. After all, if no party is obligated to clear mines it has laid, then the protections in the treaty become quite worthless.

Next, and closely related to the issue of implementation, are the ratification and universality problems of the treaty. Woefully few countries have subscribed to it. As Bruno Zimmermann of the ICRC acknowledges:

> There is also a call addressed to all states to become parties to the Convention. So far there are only 42 states which are party to the treaty, and that is far from satisfactory. We here at the ICRC hope that the possibility of taking part in the review might motivate some states to take that step which has been postponed for years.[40]

While taking an active role in the original CCW negotiations and current review proceedings, the United States did not ratify the treaty until 24 September 1995. Yet even before the ratification the United States acknowledged the importance of universality as "with only 41 parties, even the most far reaching changes will have

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[38]Paul Cornish, AP Mines Controlling the Plague of Butterflies, Royal Institute of International Studies, (London: Chatham House, 1994), 26.

[39]Comments from Tore Skedsmo, Deputy Demining Expert for the UN Department of Peacekeeping Operations, from a forum held at the UN 16 November 1994, entitled "The Land Mine Crisis Humanitarian Disaster: What Can be Done?" as reproduced in United Nations, *Ending Reliance on Nuclear and Conventional Arms*, Disarmament, (New York: United Nations, 1995), 121. (Hereafter, UN Land Mine Forum).

limited real world impact. The United States is actively encouraging more States, particularly the worst offenders, to become Party to the CCW."[41]

Obviously, the United States' calls for universality would be hollow and hypocritical if it had not finally ratified the CCW in 1995. Part of the reason that adherence has been so weak was the lack of an active sponsor. The ICRC was more active in promoting the Geneva Conventions, while the UN, the depository and sponsor of the treaty, was lacklustre in its promotion. And no particular state or group of states took up the torch.[42] This situation changed when:

> Last Fall, The International Committee of the Red Cross opened a campaign to ban anti-personnel land mines. It was a highly unusual step for the organization, which is not an advocacy organization and only once before has called for a weapons ban—of chemical weapons in the 1920s.[43]

In the last few years numerous organizations and states have taken up aggressive campaigning on behalf of the Convention due directly to heightened international awareness of the land mine disaster.[44] U.S. Senator Patrick Leahy points out that

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[40]Ibid., 125. Comments by Bruno Zimmermann Deputy Head of Delegation for the ICRC.

[41]See U.S. Department of State, Bureau of Political Military Affairs, Hidden Killers: The Global Landmine Crisis, 1994 *Report to the U.S. Congress on the Problem with Uncleared Landmines and the United States Strategy for Demining and Landmine Control,* Washington: December 1994. 28. (Hereafter DOS, Hidden Killers). Since the time of this publication, the number of ratifications and hence parties to the CCW has increased to 57. See Article 4, p. 6. of MAIN COMMITTEE I, Draft Final Declaration, CCW/CONF.I/WP. I/Rev. I., *Review Conference of the States Parties to the Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to have Indiscriminate Effects,* 2nd Resumed Session, Geneva, 22 April-3 May 1996. (Hereafter CCW Main Committee Draft Final Declaration-May 1996).

[42]W. Hays Parks, "The Humanitarian Law Outlook", in Cahill. (ed.), (1995), op. cit., 52.

[43]Raymond Bonner, "Pentagon Weighs Joining Move to Ban Land Mines", *International Herald Tribune,* 18 March 1996, 9.

[44]For example, the ICRC has been the most influential international organization promoting changes in the treaty and has been granted observer status at the review conferences. While numerous other NGOs such as Human Rights Watch have not been granted this status, they have been active in the land mines campaign. The UN and its humanitarian agencies have also become most active; the UN is usually the central coordinator for demining efforts. Most important, a good number of states have become more active as well, with many calling for a total ban. Even if they are not calling for a ban, much of their traditional arms control staff have expanded into the mines

the CCW has only recently gained widespread international support. "Only 50 countries have ratified it [the CCW], and of those, 14 did so only in the past two years"[45] This is related directly to a heightened awareness of the review process. Of course, some states may straddle the fence at the Review Conference. It is surprising perhaps, that states with the most severe land mine problems, do not participate more fully in the Geneva consultations and negotiations.[46] Incredibly "nearly three quarters of the states most plagued by land mines (including Angola, Cambodia, Ethiopia, Iraq, Mozambique, Rwanda, and Somalia) have not signed the treaty."[47] It is also likely that if the Review fails, they will continue in their inaction; if it is a success, they may be more inclined to join. So the success or failure of the CCW Review Conference could have serious ramifications for wider adherence.

Because it is inherently unenforceable, the Convention could be considered a failure. Unfortunately, the observance of IHL depends on reciprocal good will,

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issues. So this has been an area of colossal growth within the last few years and a variety of actors are paying attention to it.

[45]Leahy, op. cit., (September 1995), 20.

[46]From author's own observations at the Third Preparatory Conference. For example, Cambodia, Afghanistan and Iran attended with only Observer Status. Cambodia and Afghanistan made a few statements, but really did not participate in the negotiations. Iran was slightly more active. Angola was not even present. Other observers like the United States and the United Kingdom were quite active. Even observers with only one delegate, like South Africa and Estonia, participated fully in the negotiations. Full fledged states parties, with no land mine problem *per se*, or no longer having an interest in the trade were also extremely active (Sweden, Denmark, the Netherlands, for example). A cynic would argue that each state is out to protect its own interests, be it security or economics. While land mines are not a big windfall in the hierarchy of the arms trade, some states feel that it is their inherent right to sell what they wish. Certainly all the big land mine producers and possible future producers showed up *en masse*. Still, it appears that some states are active in promoting the collective good, without direct benefits to themselves. But the states that really need these benefits are most inactive. Perhaps as one seasoned former U.S. and UN diplomat argues, quite often these states cannot afford to send substantive and well-briefed delegations to the very expensive Geneva (even the richer states complain about the costs of supporting delegations) for long periods of time to debate these issues. Rather, they stretch the resources of whatever diplomats that may already be stationed in Geneva.

but obviously in the case of the Land Mines Protocol this has not been adequate. Hays Parks offers the following insight into this problematic area of the law of war treaty:

> It is important to bear in mind that the law of war is negotiated, and nations become party to law of war treaties, on the assumption that there will be a good-faith effort towards compliance. That assumption must be balanced with the reality that there are some in the world who have no intention of respecting any law unless it is likely to operate to their advantage—which also is true with respect to domestic law. The effort internationally or domestically is to develop better law—and a mechanism for encouraging respect and enforcement when that fails. [48]

Another weak area concerning enforcement of the CCW is the lack of punitive options such as sanctions. Although the CCW and Additional Protocol I of the Geneva Conventions are linked in intent:

> The 1980 Convention does not allow for sanctions against violations of its own rules. Its reference to the Geneva Conventions cannot entail application of the provisions they contain for the prosecution of grave breaches, since these provisions concern only such breaches as are committed within the framework of the said Convention.[49]

As there is no official legal linkage between the two Conventions or official language on punitive measures, there is no recourse against violators. Captain Ashley Roach points out: "...this weapons convention has no positive provision in this regard [for violations] and no provisions for the individual or state responsibility for violation of its terms."[50]

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[47]Sarah Walkling, "First CCW Review Conference Ends in Discord Over Landmines", Arms Control Today, November 1995, 26.

[48]See Parks, op. cit., in Cahill (ed.), (1995), 48.

[49]As Aubert explains, "in application, these two legal instruments complement each other from the miltary point of view, since the precepts contained in Additional Protocol I on the methods and means of warfare and the protection of civilians against the effects of hostilities are given direct application in the restrictions on the choice and use of weapons formulated in the Protocols to the 1980 Convention". See Aubert, 492.

[50] Roach, 62.

Most crucial to the survival of the treaty is that groups engaged in both internal and external conflict respect it. Even when a peace treaty is in operation, minefields are deliberately left behind. For example, the Serbs departing from Sarajevo's suburbs have been accused of deliberately setting mines, hand grenades and booby-traps to kill and injure those remaining or returning to these areas.[51] These actions illustrate how land mines can be deliberately misused with impunity by certain parties. If however, there were strong compliance measures available for punishing transgressors the situation might be different. David Gowdey argues that:

> If there are severe penalties imposed on any party violating the provisions of the Convention, then armed groups in an internal conflict will have a strong incentive to adhere to its provisions. Additionally, if provisions regarding grave breaches are inserted in the Convention, then those persons responsible for such breaches, from whatever party to the conflict, could be tried as war criminals. Hopefully, this could be a rather serious disincentive to the indiscriminate laying of mines.[52]

Not only does the CCW lack some fundamental strengths, but the restrictions in place are weak and problematic. The "General Restrictions" under Article 3.2 are designed to protect the civilian population from direct attack from land mines. The definition of what constitutes a civilian is not spelled out, and unfortunately, direct attacks on civilians do occur.[53] Article 3.3 is designed to prohibit the indiscriminate use of land mines, by distinguishing between military and civilian targets. Human Rights Watch argues that this Article:

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[51]Askold Krushelnycky, "Pain and Mistrust Mark the Handover of Power in Sarejevo", *The European,* 21-27 March, 1996, 8.

[52]Comments from correspondence with author.

[53] Article Three does not actually include a definition of a civilian or civilian population. But a definition albeit a broad one is found under Article 50 of the 1977 Additional Protocol I to the Geneva Conventions. A civilian is any person who is not a member of the armed forces as defined under Article 43 of this Convention and Article (A) (1), (2), (3) and (6) of the Third Geneva Convention. If there is doubt whether a person is a civilian, then that person shall be presumed to be one.

> ...[R]eflects the failure of its authors to make the analytic distinction between indiscriminate weapons *use* (which can be minimized if combatants take care to distinguish military targets from civilians), and the indiscriminate *effects* that naturally result from a mine's delayed-action operation.[54]

Another problem with the indiscriminate use of land mines is found under Article 3.3(c) which prohibits the use of mines "...which would be excessive in relation to the concrete and military advantage anticipated." According to HRW, this interpretation is often left to the judgement of ground forces. For example, a commander in the field may decide that the mining of an agricultural area which civilians have fled may give him a short-term advantage over his opponents. But when the civilians return, and there is no longer any military advantage, the mines still remain, placing civilians in that area at risk. Therefore:

> The temporal dimension of landmine use hopelessly complicates the calculation; it requires combatants to weigh anticipated military utility against dangers that, because of the time lag involved in mine explosions, might not emerge until far into the future.[55]

There are also other vagaries of language that weaken this Article. For example, Article 3.4 states that "All feasible precautions should be taken to protect civilians from the effects of weapons to which this Article applies." Feasible precautions are then vaguely described under this Article as "Those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations." According to the ICRC:

> The term "feasible" allows for great flexibility in interpretation....Furthermore, the provision is weak because feasible measures would include the installation of fences or signposts, but experience has shown that these can be removed by the local population, either out of ignorance or from the profit they can derive from such items.[56]

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[54]HRW, A Deadly Legacy, 286.
[55]HRW, A Deadly Legacy, 288.
[56]See ICRC Background Document, (April 94), 25.

Using the term feasible has numerous problems since no specific precautions are named, thus it is left at the field level to decide exactly when military necessity will prevail over humanitarian concerns. But as the ICRC also acknowledges, more stringent terms of restraint may not have been acceptable to the military.[57] This is where the military imperative won the argument over humanitarian needs, as "...Conference participants noted that requiring effective measures implied more of a guarantee. Whereas requiring only feasible steps without other precautions failed to place sufficient emphasis on humanitarian considerations."[58]

In addition, the definition of what constitutes a military objective is also vaguely termed. For example it is prohibited under Article 3.3(a) and 3.3(b) to use weapons against targets not defined as a military objective, or to use a method or means of delivery that cannot be directed against a specific military objective. Under Protocol II, Article 2, Definitions, it is stated that:

> "Military Objective" means, so far as objects are concerned, any object which by its nature, location, purpose or use makes an effective contribution to the military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

This vagary of language makes this definition open to a variety of interpretations. According to David Gowdey, this is:

> ...[A] terrible definition from the humanitarian view. They have used the definition in Article I of the 1977 Protocol to the Geneva Convention, which basically says that a military objective is anything that may have military utility, including hospitals, schools, or anything else you can think up. It is a fundamental issue, but one that we encountered in all foray dealing with civilians and the military at war.[59]

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[57]Ibid.

[58]See HRW, A Deadly Legacy, 291-292, citing a discussion in the Report of the CCW Preparatory Conference, UN Doc. A/CONF 95/3 (May 25, 1979) Annex II, 3.

[59]Comments from correspondence with author.

Article Four deals with restrictions on mines other than remotely delivered mines (and booby-traps and other devices) in populated areas. Like Article 3, this Article is designed to protect the civilian population but unfortunately suffers from the same vagaries of language. Article 4.2 prohibits the use of mines in populated areas when combat is not taking place or does not appear to be imminent. It would be unrealistic to think that civilians do not sometimes get caught in the crossfire when a battle is being waged. Still, this protection of civilians is "...subject to exceptions which remove much of its apparent force."[60] Article 4.2 may be waived if this concentration of civilians happens to be:

> ...[P]laced on or in the close vicinity of a military objective belonging to or under the control of an adverse party; [Paragraph 2a] or, measures are taken to protect civilians from their effects, for example, the posting of warning signs, the posting of sentries, the issue of warnings or the provision of fences. [Paragraph 2b]

On the surface, this Article seems to contradict itself and the notion that only military objectives should be targeted. As a result, even if combat is not taking place, if an enemy target is located within a civilian concentration, then that civilian concentration can become a legitimate target. The second part of the exception is also problematic. The measures to protect civilians produce a very minimal list, and it is not even mandatory. At the original Preparatory Conference, both the terms "effective" or "all feasible precautions" were debated. The former Soviet Union thought that "effective" measures were too restrictive while the Western powers thought "all feasible" were too vague. The compromise was the even vaguer term "Measures". According to Carnahan, "The present compromise language requires that *some* measures be taken to protect civilians,

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[60]Carnahan, 81.

but does not guarantee the "effectiveness" of the measures."[61] Basically, this article has shown that poor semantics contribute to the ineffectiveness of the protections under this Article.

Article Five deals with restrictions on remotely delivered mines. During the original negotiations there were discussions about these mines vis-à-vis an outright ban; however, the abolitionists lost the fight. Instead, remotely delivered mines are subject to the general restrictions placed on other mines: "The use of remotely delivered mines is prohibited unless such mines are only used within an area which is itself a military objective or which contains military objectives" (Paragraph 1). These prohibitions are further alleviated by two exceptions: " [Unless] (a) their location can be accurately recorded in accordance with Article 7 (1) (a); or (b) an effective neutralizing mechanism is used on each such mine,..." Unfortunately, one of the biggest problems with remotely delivered mines is that they are difficult to record, making it most difficult to define the parameters of the minefield. There are also no specific time limits designated for these mines to be destroyed or rendered inactive. Remotely delivered mines are often used to reach deep into enemy territory, and are often designed to meet a specific and speedy military objective. Once this objective has been met, the mines will remain a hazard.[62] The final problem with this restriction is that Paragraph 2 states that "Effective advanced warning shall be given of any delivery or dropping of remotely delivered mines which may affect the civilian population, unless circumstances do not permit". Of course, what actually constitutes "effective

[61]Ibid., 81.
[62]HRW, A Deadly Legacy, 301.

advanced warning" is not defined. And the phrase "unless circumstances do not permit" is a get-out clause. For example, surprise military advantage may preclude any warnings as well as "concern for the safety of the aircraft dropping remotely delivered mines"[63] The Article says nothing about warning the population after the mines have been dropped, which would be possible when the military advantage and safety of combatants have been assured.[64]

Finally, Article Seven, Recording and Publication of Minefields, Mines and Booby-Traps also contains flaws. According to Hays Parks: "The recording provisions contained in Article 7 are far too general, [and] are related to outmoded methods,..."[65] The Article only requires that "the parties to a conflict shall record the location of: all pre-planned minefields laid by them;..." (Paragraph 1a). In theory this sounds practical, except that no definition is given of what constitutes a pre-planned minefield.[66] But at least parties are required to record the location of the minefields. The problem is that "...such a detailed military plan could not exist for the vast majority of minefields emplaced during wartime. In the heat of combat many minefields will be created to meet immediate battlefield contingencies with little "planning" or "preplanning"."[67]

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[63]see A.P.V. Rogers, "Mines, Booby-Traps and Other Devices", International Review of the Red Cross, No. 279, November-December 1990, 528.

[64]Carnahan, 80.

[65]Parks, op. cit., in Cahill, (ed.), (1995), 56-57.

[66]Although a definition was not forthcoming from the conference it was thought to mean a certain degree of advanced preparation that goes beyond being strictly 'planned'. According to Carnahan, "Since "pre-planned" means more than "planned", a "pre-planned" minefield, is, by its nature, one for which a detailed military plan exists considerably in advance of the proposed date of execution." At the same time, minefields are not necessarily considered "pre-planned" simply because there are military plans available before the outbreak of hostilities. See Carnahan, 84.

[67]Ibid.

Regarding other types of minefields, the provisions are also quite weak. For example, "The parties shall endeavour to ensure the recording of the location of all other minefields,..."(Paragraph 2) The term "endeavour" means that the party does not have to record these minefields, but must try to do so. If a condition is not made mandatory then it relies strictly upon good-will. This can be problematic as parties technically would not be breaching rules by not following procedures. Another problem is that not all armies keep proper records, or else they are honestly lost at some point.[68] If an army is in retreat, making sure it has retained the proper records would probably not be a priority. Bosnia is a case in point: in the aftermath of that conflict, accurate records are hard to find. According to the ICRC:

> The weakness of the requirements for recording and publication of location contained in the Landmines Protocol have been remarked upon by many. From a humanitarian perspective, it would be desirable to require that all minefields be recorded, not just "preplanned" minefields....It should be recognized, however, that even the present loose requirements have been routinely ignored by nearly all users of land mines.[69]

In addition, records are not always accurate. For example:

> Even when combatants endeavor to keep precise and detailed maps of the mines they lay, as the British did during the Falklands/Malvinas War, the records have proved wildly inaccurate. The location of landmines shift with changing weather conditions and the passage of time. In the case of remote delivery, many mines are placed outside the intended target area.[70]

Even if records are accurate, unless mines are removed promptly, the purpose of recording mine locations becomes futile.

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[68]Yves Sandoz, "Turning Principles into Practice: The Challenge for International Conventions and Institutions'', in Cahill, (ed.), (1995), 189.
[69]ICRC, Background Document, (April 1994), 63.
[70]HRW: A Deadly Legacy, 293.

The rest of the Protocol basically requests that for the protection of civilians the relevant parties exchange mine record information once hostilities have ceased. Again vagaries of language weaken these clauses. Article 7.3 (a) states that these mine record disclosures shall commence "immediately after the cessation of active hostilities." Cessation of Active Hostilities is not so defined. It is supposed to lie somewhere between beyond a temporary cease-fire and before a formal peace treaty. In addition, there is also the presumption that hostilities will not resume. The logic behind this clause is that states should not prolong the suffering of their civilians. Yet at the same time, they may be reluctant to volunteer minefield locations if there is some possibility that these mines may retain some tactical value in the future.[71] The problem here, is one of interpretation. States involved in long civil conflicts would have a hard time dealing with, and implementing this clause.

Section 5.5-The Review of the CCW (How it Stands Today)

This section will examine the issues that warranted serious negotiations at the Preparatory Conference, and what key issues remain to be resolved.[72] The Review Conference, preceded by four Preparatory Conferences of the Group of Governmental Experts, was seen as a timely opportunity to amend the shortcomings of the CCW. The pragmatists simply wanted to strengthen the existing Protocol, realizing that it would be difficult to get any major changes

[71]In other words, they may wish to reuse them. Carnahan, 88.

[72]It should be noted that any references to the Third Preparatory Conference will be attributed to the author's observations, but any Conference working papers will not be quoted directly, due to the author's attendance while a UN intern. The general discussions as to what occurred and the various

through. Controversial positions simply will not go anywhere. As a result, certain compromises will have to be made and as Joost Hiltermann, Director of the Arms Project of Human Rights Watch cautions, the drive for a total ban may not succeed. He predicts that:

> The States Parties that are currently reviewing the Convention are not about to make great changes to the text of the Convention. There are three main proposals on the table at Geneva. The first one is the one proposed by Sweden and supported by the ICRC which calls for a ban on all anti-personnel mines. This is the best position, which unfortunately, probably will not go anywhere. The second position is the one proposed by the U.S. and Denmark, which says, yes, land mines can be used, but they must have self-destruct or self-neutralizing mechanisms, unless they are placed in marked and fenced areas....The third position is the one presented by France and Germany which says that land mines are a bad thing, but in certain circumstances the mines do not even have to have the self-destruct, self-neutralizing mechanism or have to be placed in fenced and marked areas, in times of conflict, or when there is an imminent threat to one's forces....The U.S. position is inadequate, but it is probably the only position that has any chance of passing. The Swedish position, which is very good, stands little chance of getting much of an audience.[73]

Critics of the Review Conference process thus far have viewed it as a major disappointment. The failure of the September-October 1995 Review Conference to reach agreements after four preparatory conferences can be characterized by the word "discord". The problem may lie in the negotiating process itself; since parties are acting by consensus "... the lowest common denominator prevails, with obstructionist states holding the trump cards."[74] As a result, a resumed session of the Review Conference was held in Geneva from 15-19 January 1996 on military-technical issues, with the concluding session held 22 April to 3 May in Geneva. Despite the problems encountered during this extended review process, certain

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positions can be debated. Any official texts gained or discussions held with other participants concerning that conference may also be used.

[73]Hiltermann in UN Land Mine Forum, 125-128. Currently, it is estimated that some 39 states are in favour of a total ban. See *International Herald Tribune,* June 4, 1996, 8. It should be noted however, that while some parties or organizations remain adamant on particular positions, other delegations at the Conference have managed to keep their options open and shift their positions. They are, as one delegate phrased it like "moving targets."

[74]Stephen Goose, "CCW States Fail to Stem Crisis: U.S. Policy Now an Obstacle", Arms Control Today, July 1996, 14.

substantive changes have been made to the texts of the CCW and its Protocols. Whether these represent real changes or are in effect simply window-dressing remains to be seen.[75]

Changing the scope of the treaty to include internal conflicts created a good deal of conflict and discussion between negotiators. This issue was drawn mostly along North-South lines; the Western states encouraged the change, but the other non-aligned and Third World states hesitated as most of the relevant internal conflicts have taken place in their part of the world. The official argument championed by the anti-scope coalition at the Third Preparatory Conference was that wider adherence to the Protocol was necessary before any expansions of its mandate should take place. This was seen as a tactic to indefinitely delay changing the scope of the Convention. Some of these delegations also insisted on the inclusion of a note stating that there was no consensus on changing the scope. In response, other delegations verbally requested that it should be noted that there was such a consensus.[76] After the Fourth Preparatory Conference in January 1995, it seemed likely that pro-change advocates were going to win. According to the DHA delegate, David Gowdey, there was sufficient agreement on changing the scope "although there will undoubtedly be some discussion on this point at the Review

[75]It should be noted that all texts and discussions either in the rolling texts of the Preparatory Conferences, or in the President's Text of January 1996 only reflect the present state of negotiations at the time and are not binding until the final Review Conference. While certain proposals have been consistent from the Experts Meetings through the first Review Conference, others are still inviting controversy. Throughout the various meetings and through the author's own observations at the Third Preparatory Conference, commentaries in periodicals and newspapers as well as through contact with participants, a certain final framework of the review process is envisaged. The January (1996) President's Text was used as a measuring stick for most of these discussions. Indeed, it is expected that there will be little change to the final Review Conference of April 1996.

[76]Author's observations and notes from Third Preparatory Conference, (Geneva, August 1994).

Conference itself."[77] According to Peter Herby of the ICRC, agreement on changing the scope seemed within grasp as India changed sides.[78] At the end of the final Preparatory Conference, there were two different versions 'on scope' ready to be submitted to the Review Conference.

Alternative A, Paragraph 2 states that "With the main purpose of protecting the civilian population, the Protocol shall apply in all circumstances including armed conflict and peace."[79] Although "all circumstances" is a rather vague description, one could take it to mean at all times of conflict—which would include internal conflicts. Alternative B, on the other hand, is more specific. Paragraph 3 states that:

> In cases of conflicts referred to in para. 2 above that take place in the territory of a High Contracting Party that has accepted this Protocol, the dissident armed groups in this territory shall be automatically bound to apply the prohibitions and restrictions of this Protocol on the same basis.[80]

At the Review Conference itself, although the issue of scope remained contentious, the language of the article was promising. Paragraph 3 of Article 1, Scope of Application stated that "In case of armed conflicts not of an international character occurring in the territory one of the High Contracting Parties, each party to the conflict shall be bound to apply the prohibitions and restrictions of this

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[77]Communication between delegate and the author.
[78]Telephone communication between delegate and the author.
[79]Alternative A as reproduced in The Chairman's Rolling Text, CCW/CONF.I/GE/CRP.2/Rev. 3, *Group of Governmental Experts in Preparation for the Review Conference of States Parties to the Convention on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects,* 4th Session, January 1995, (Hereafter CCW Rolling Text, January 1995).
[80]Ibid.

Protocol."[81] Thus, non-international armed conflicts are actually defined in the prohibition and "each party" rather than a "dissident group" is obligated to observe the Protocol. "Each Party" also carries a more neutral connotation and does not differentiate between the types of combatants. At the final Review Conference, the amended Protocol II kept this language intact regarding the scope of application.

The next major area where it was hoped that there would be some progress in strengthening the treaty was the inclusion of verification measures. In the review process, this area has proved to be the most problematic and controversial. As Tore Skedsmo saliently observes, "When things like verification are brought up, it touches the values of nations which they do not want touched. That is the sad part of it."[82] The case for and against verification seemed to fall mostly down North-South lines as did the divisions over changing the scope. Some delegations claimed that verification would hinder universal adherence, which should be the primary focus of the treaty. The anti-verification coalition also claimed that the idea of a verification commission would be premature because it would be difficult to implement against states who remain outside this Convention. A further objection was that a verification commission would incur responsibilities and costs to poorer states which would further stretch their already limited resources. The pro-verification coalition argued that if verification had been

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[81]See Article I "Scope of Application", of the President's Text, CCW/CONF.I/WP.4/REV.1, *Review Conference of the States Parties to the Convention on Prohibitions or Restrictions on the Use of certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects*, 1st Resumed Session, Geneva, January 1996. (Hereafter CCW President's Text, January 1996). It should be noted that the language of the text reflects only the stage of negotiation, it is not binding until the final Protocol is ready to be adopted.

[82]Tore Skedsmo, in UN Land Mine Forum, 131.

included in the original treaty, the CCW treaty would have been much stronger. This viewpoint also supported verification as a necessity for the integrity of the treaty. If there are violations of the treaty, then they must be exposed if the treaty is to work. The pro-verification advocates also strongly disagreed with the position that a verification regime would discourage wider adherence.[83]

The proposals for a verification regime warrant attention because there was a good deal of support for these measures and some well-thought-out proposals were put forward. They illustrate how important and necessary was the inclusion of verification to some delegations. The basic verification article states that any state party should be able to request the depository (the UN), to convene a verification commission to inquire into the alleged violations of the Protocol. The commission would be open to any state party with decision making to be taken by consensus or majority. It would have the option of deciding within 48 hours whether the request is frivolous or whether to proceed with an inquiry (Alternative C, Article 10, Verification Commission).[84] The next step in the inquiry process would be to dispatch a fact-finding mission to the relevant location with 24 hours prior notice. The inspected party would have to co-operate but at the same time would be allowed to protect its sensitive interests. Then the fact-finding commission would transmit its results to the Depository within one week after the fact-finding team leaves the territory (Alternative C, Article 11, Fact-Finding Missions).[85] Finally, the compliance article would act on the verification commission's and the fact-finding commission's results. Either a request can be

[83]Author's observation at the 3rd Preparatory Conference.
[84]CCW, Rolling Text, (January 1995).

made to the party in violation to "remedy the situation", or else "the States parties shall consider measures designed to encourage compliance, including collective measures in conformity with international law, and may, in accordance with the UN Charter, refer the issue to the attention of the Security Council" (Alternative C, Article 12 Compliance, paragraphs 2 and 3).[86] Finally, the grave-breach provisions of the 1949 Geneva Protocols would also apply to this Protocol, meaning that any deliberate acts resulting in injury or death would make the party responsible liable for its actions. It is interesting to note that much of the verification, fact-finding, and compliance measures envisaged here are remarkably similar to those of the CWC. Although sanctions are not specifically mentioned, they could be enforced under collective measures.

At the final Preparatory Conference held in January 1995, the Chairman tried to reach a compromise between transparency measures and a verification commission but was unsuccessful. The anti-verification coalition felt that any verification regime would be manipulative and intrusive. This coalition also insisted on the inclusion of the reservation that "the concept of Verification for this Protocol is not accepted by a group of countries."[87] The prevailing mood at the end of the Conference was that if anything came out of the Review Conference, it would be very weak verification measures.[88] As David Gowdey explained:

> Verification and Compliance issues are completely up in the air at the present time. The Gang of Four objects to any verification at all, and others want a strong political filter over whether any investigation can be conducted. This will be a mess at the Review Conference.[89]

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[85] Ibid.
[86] Ibid.
[87] Ibid., Appendix I, Proposals relating to Verification and Compliance.
[88] From telephone conversation with Peter Herby one of the ICRC delegates.
[89] Correspondence with the author.

Ultimately, no verification or fact-finding components were incorporated into the President's Text of January's resumed Review Conference, or in the final April-May conference. But some enforcement mechanisms were incorporated as encompassed under Article 14 of the January President's Text. There is no mention, as there were in previous texts, of referring violations to the Security Council. The only substantiating measure is addressed under Paragraph 2 of Article 14, Compliance with the Protocol, stating that any wanton violations of this Protocol would be treated as a "grave breach".[90] The inclusion of "grave breaches" under the compliance text places a greater obligation on parties, stating that any violations will be cited officially and will be recognized as such. In the final amended Protocol, the compliance issue remained intact, was strengthened, and made even more specific. Penal sanctions against violators are actually now required. For example, under Article 14.1 "Each High Contracting Party shall take all appropriate steps, including legislative and other measures, to prevent and suppress violations of this Protocol by persons or on territory under its jurisdiction or control."[91]

The January 1996 Review Conference text also explored some implementation measures under Article 11, Technological Cooperation and Assistance, and Article 13, Consultations of the High Contracting Parties. Previously, these were

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[90]CCW, President's Text (January 1996).

[91]Protocol II as Amended on 3 May 1996 Annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, CCW/CONF.I/14. *Review Conference of the States Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have*

proposed in a similar framework in the final Preparatory Conference as Alternative A, Commission of States Parties and Alternative B, Compliance Monitoring. These were introduced as alternatives to verification and compliance although "several delegations expressed the view that, whilst not agreeing to every provision of each proposal, the three alternatives A, B, and C, were not exclusive but complementary to each other."[92] One could argue that while verification is a necessity, implementation measures are also important.

Article 11, Technical Cooperation and Assistance requests that the High Contracting Parties exchange information and equipment concerning the Protocol's implementation requirements: share information on mine clearance; provide financial assistance through a voluntary fund; and request assistance in mine clearance. In the final text in the revised Protocol adopted in May 1996, this Article has remained essentially the same. Article 13, Consultations of High Contracting Parties, conceived of a conference of the High Contracting Parties to be convened yearly. This Conference shall review annually the status and adherence of the Protocol; consider new technologies to protect civilians from the indiscriminate effects of land mine use; review reports on implementation procedures, and prepare for Review Conferences. The High Contracting Parties will also provide reports on the dissemination of the Protocol's requirements to their armed forces and civilians; mine clearance programmes; progress towards meeting technical requirements of the Protocol; and information exchange and

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Indiscriminate Effects, 2nd Resumed Session, Geneva 22 April-3 May 1996, (Hereafter CCW Amended Protocol II May 1996).

[92]Footnote I from Appendix I of the Proposals Relating to Verification and Compliance. See CCW Rolling Text, January 1995.

technical cooperation. The final amended Protocol also kept this Article intact. In addition, the Draft Final Declaration of Main Committee I of the Review Conference declared that the First Review Conference should be held five years following the EIF of the adopted amendments to the CCW but not later than 2001.[93]

The proposals for a total prohibition on mines or particular types of mines met with mixed results. The case for banning specific types of mines, namely self-destructing or "dumb" mines, non-detectable mines or remotely delivered mines received more serious negotiation. The prohibitions on "dumb" mines and remotely delivered mines contain significant exceptions, so in effect these mines are not banned. There is, however, a complete ban on non-detectable mines. Article 4 of the January 1996 President's Text, Restrictions on the Use of Anti-Personnel Mines, stipulates that "It is prohibited to use anti-personnel mines which are not detectable, as defined in paragraph 2 of the Technical Annex." This would seem fairly straightforward and comprehensive, except that there were disputes about what, exactly, constitutes the technical specifications of an undetectable mine. The issue could not be resolved during the first Review Conference. The basic dispute is whether to specify an exact minimum figure for metal content or to leave the language vague (mines should be easily detected by commonly available and conventional methods or equipment).[94] The current Annex in the January 1996, President's text requires that mines should incorporate

[93]CCW, MAIN COMMITTEE I, Draft Final Declaration, (May 1996). In addition, parties have also agreed to annual consultations about the Protocol.

[94]It is not enough for mines to be detected only by commonly available equipment; as some mines contain only minute amounts of metal. When there are other elements in the ground, it becomes

a device that enables them "to be detected by commonly-available technical mine detection equipment and provides a signal response equivalent to a signal from eight grams or more of iron in a single coherent mass."[95]

States with large stockpiles of mines under eight grams of iron would simply be reluctant to change them. These mines would be banned completely if the eight gram rule becomes official. The President's text also contains some other proposals which may weaken this prohibition. In an effort to appease those who possess stockpiles of mines not fitting this requirement, two additional paragraphs describe a phase-in period. Paragraph 2b, Specifications on Detectability, in the Technical Annex, states that mines produced before this protocol takes effect will have to be altered to meet the detectability requirements. But, Paragraph 2c relaxes this requirement in the case of parties which are not immediately able to comply with these modifications. In accepting this Protocol, they must also promise to minimize use of these mines during a deferral period. This is a rather disputed paragraph, viewed almost as a get-out clause, and many delegations expressed their reservations about its inclusion. Some delegations felt that the time period was too lenient while others objected to any time limits at all.[96] In the amended Protocol, the specific technical requirement of the eight gram rule prevailed, but

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very difficult to differentiate between a mine detection and background noise from the soil. Therefore, it is crucial that a specific metal content be required for mine detection purposes.

[95]See the Technical Annex of the CCW, President's Text, (January 1996).

[96]See CCW, President's Text (January 1996), Technical Annex, (2) Specifications on Detectability, 15. In addition, China opposed the idea of retrofitting its stockpiles to make them more detectable and India wanted an indefinite phase-in period for making mines detectable; see Walkling, op. cit., (November 1995), 26. There was some compromise made in the negotiating position between the First Review Conference (October 1995) and the resumed Conference in January of 1996. India backed down from insisting on an indefinite phase-in period to agreeing to eight years, and China lowered its original position of twenty five years down to twelve. See Sarah Walkling, "CCW Negotiators Make Headway On Strengthening Of Landmine Protocol", Arms Control Today, February 1996, 27.

only on mines produced after 1 January 1997. The High Contracting Parties will then have nine years (from the EIF of this amended Protocol) to incorporate these measures, but in the intervening period they must minimize the use of these mines. Thus there is a solid and strict basis as to what constitutes a detectable mine. The good news is that states have agreed to ban them. The bad news is that they have nine years to do so during which they only have to promise to minimize use. The concept of "minimum" use is not defined and could later prove to be problematic. More important, there is no way to actually verify the minimum-use requirement.

There has also been a tightening of general restrictions on non-self-destructing and remotely delivered anti-personnel mines. Article Five of the January 1996 President's Text, Restrictions on the Use of Anti-Personnel Mines Other than Remotely Delivered Mines prohibits the use of non-self-destructing (NSD) or non-self-deactivating mines unless the following conditions are met. These mines must be placed in a clearly marked perimeter area and monitored by military personnel, and they must be cleared before the area is vacated, unless the area comes under the jurisdiction of another state which takes responsibility for the mines. Paragraph 3 of this Article is perhaps the most problematic. A party to the conflict is relieved from its obligations if "...such compliance is not feasible due to forcible loss of control of the area as a result of enemy military action, including situations where direct enemy military action makes it impossible to comply."[97] In addition, Paragraph 4 states that forces which gain control of an area "...shall, to the maximum extent feasible, maintain and, if necessary, establish the protections required by this Article until such weapons have been cleared."

Exceptions have severely weakened this Article. At the final Preparatory Conference, a group of states held out for a total prohibition against non self-destructing mines, while others simply wanted restrictions on use. Something cannot be truly prohibited, if there are exceptions to its prohibition. But those parties which possess large stocks of non-self-destructing mines did not want them banned outright. Initially, it was a group of Western states which supported the exception to the prohibition on the use of non self-destructing mines as long as they are in a marked and monitored area. Part of the reason that states are reluctant to completely relinquish NSD mines is because they are the only type of mines that can be used to protect border and military installations. The Russian delegation insisted on including the clause stating that parties are excluded from clearance obligations if military action makes it impossible. The problem here is that loss of control of an area is not specifically defined—it could be anywhere within a country.[98] Thus, the party who sowed the mines may not be required to clear them. As Senator Patrick Leahy cautions:

> ...[T]he administration [U.S.] must take a firm stand in opposing a Russian proposal that would establish an exception to the self-destruct and marked and monitored minefield requirements,...Such a broad exception would virtually negate the effect of these requirements.[99]

This particular clause relies on good faith compliance, but in the real world will probably be impractical or unrealistic. In the heat of battle, combatants may have to shift positions very rapidly in order to protect their own forces. Their own

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[97]Article 5 of the President's Text, January 1996.
[98]Telephone conversation with ICRC delegate after the January 1995 Preparatory Conference.
[99]Leahy, op. cit., (September 1995), 23.

survivability or military necessity would take precedence over responsibilities for a minefield, and would outweigh the humanitarian argument.

There is also the problem of deciding which forces actually control an area. For example, it would be difficult to attribute responsibility for the mines to guerrilla forces who come down from the mountains at night into a village. Their control of the area is only temporary. The concept of direct enemy military action is not sufficiently defined; there are no criteria specifying exactly when enemy action would prevent forces from complying with their obligations—and when they would be legitimately absolved. Finally, after combat has ceased, when exactly do obligations resume? [100] In reality, the restrictions on this mine type can be easily circumvented. In the amended Protocol, both the restrictions and exceptions were adopted intact from the January President's text.

The review process has also tightened restrictions on remotely delivered mines. Under Article Six, Restrictions on the Use of Remotely Delivered Mines:

> It is prohibited to use remotely delivered mines other than anti-personnel mines unless they are self-deactivating (and) (or) equipped with an effective mechanism of self-destruct or self-neutralisation so they will not function as mines as soon as it is anticipated that they will no longer serve the military purpose for which they were placed in position.[101]

The time period for mines to self-destruct or self deactivate is important in terms of the safety requirement, which overrides the military utility of the weapon. Previous contributions at the final Preparatory Conference placed the time period for self-destruction from 7 to 90 days, and self-deactivation from 30 to 365

[100] Author's correspondence with David Gowdey.
[101] Article 6. 2 in CCW, President's Text (January 1996), 6.

days.[102] It is significant that there is a combination of self-destructing and self-deactivating requirements. If a mine is self-destructing then a particular percentage will fail and remain a hazard. If the mine is self-deactivating, then from a mine-clearance perspective, it has to be treated like a live mine because there is no way to tell the difference. Another danger in using only the self-deactivating option is that the mine could be picked up and reused. Thus, combining both options lessens the risk from these mines. In addition, it is very difficult to fence the parameters of remotely delivered mines, so it is important that they be rendered useless as quickly as possible, especially if they fall outside the target area. The amended Protocol specifications require that all remotely delivered mines be designed so that no more than ten percent fail to self-destruct after thirty days. There should also be a back-up self-deactivation feature so that no more than one in a thousand mines will function 120 days after dispersal.[103] Finally, the requirements for self destruction and self deactivation, may be deferred for a period not to exceed 9 years.[104]

There was also heated debate about including disarmament measures during the review process. The hope of a broad blanket ban on land mines was perhaps

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[102]See CCW, Rolling Text, (January 1995) & Leahy, op. cit, (September 1995), 23.

[103]CCW, Amended Protocol II, (May 1996), Technical Annex, Paragraph 3, Specifications for self-destruction and self-deactivation, 16.

[104]Eight years is considered middle-of-the-road for a phase-in period. Some reports from the negotiations had China demanding a 25-year phase-in period and Russia at least 15 years. Both states were reluctant to specify a time limit for self-deactivating mines. See Disarmament Diplomacy, February 1996, 45, and Walkling, op. cit., (November 1995), 26. Such a long time period would make a mockery of the whole process. Basically, many states with large stockpiles of so-called dumb mines resent the fact that other states wish to keep their own expensive and high technology smart mines but ban the older types. There is no "carrot" of financial aid in this process. Thus, they are balking at replacing stocks. As "dumb mines" have caused much of the land mine devastation problem, most states have accepted that eventually they will have to be eliminated. But an outright ban would upset the sensibilities of states with large stockpiles. So a phase-in period to

unrealistic. Michael Matheson, the head of the U.S. delegation, went on record as saying that "there are very few major military powers that would consider a ban on all anti-personnel mines. So its not a serious negotiating possibility...."[105] Logically, if a mine is restricted or prohibited, then it should be made certain that it is not readily available. During the Preparatory Conferences, both transfer, production and stockpiling issues were fiercely debated. Several delegations acknowledged that while in theory they may have supported prohibitions in this area, in the current negotiating environment they pursued a path of compromise. One delegation proposed separating the transfer issue from the even more controversial issues of production and stockpiling. It was thought that wider support would be given to transfer restrictions—therefore it made sense to focus upon it. At the same time, there was also an interesting proposal to create a separate Protocol that simply banned the use, transfer, stockpiling and manufacture of anti-personnel mines. States wishing to support a total ban were free to take that option. Unfortunately, states could also choose to ignore this protocol.[106] By the final Preparatory Conference, there were optional Articles 6 *bis* relating to prohibitions on the use, development, manufacture, stockpiling, and transfer of certain mines and booby-traps, and 6 *ter* on transfers. These articles also came with a note of reservation that they were not accepted by all delegations.[107]

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eventually get rid of them is seen as a compromise solution. If it is too long and drawn out, however, then it really will not be a good compromise at all.

[105]Disarmament Diplomacy, January 1996, 40. Although it has been reported that the Pentagon is reassessing its policy and other states are now supporting a total ban on land mines, unless the major opponents of a ban suddenly switch their positions as well, it is debatable whether such a move would be accepted across the board.

[106]Author's observations at 3rd Preparatory Conference.

[107]Note 3 Article 6 bis, p. 7 CCW, Rolling Text, (January 1995). The terms 6 *bis* and 6 *ter* refer to the second and third Article 6 respectively.

The Article relating to a total ban disappeared after the Review Conference. The Article that dealt solely with transfers fared better, as little was changed from the final Preparatory Conference to the Review Conference texts. Article Eight, Transfers (previously Article Six in the rolling text), requires that the High Contracting Parties refrain from the transfer of any mines for which use under the Protocol is prohibited; refrain from transferring mines to a non-state recipient; exercise restraint in transfers of mines whose use is restricted; and refrain from transferring to states which are non-parties to the treaty. Under the current wording, no distinction is made between land mines and land mine components and technology, which could be used to circumvent transfer restrictions. This text also was incorporated into the final amended Protocol.

There are also some clearer and stricter restrictions concerning the mine marking, monitoring, and clearance measures designed to protect civilians. For the first time, the issue of responsibility is clearly defined and spelt out under the current Article Three, General Restrictions on the Use of Mines, Booby-Traps and Other Devices. Under Paragraph 2:

> Each High Contracting Party or party to a conflict is, in accordance with the provisions of this Protocol, responsible for all mines, booby-traps, and other devices employed by it and undertakes to clear, remove, destroy or maintain them as specified in Article 10 of this Protocol.[108]

There is also a more specific description of prohibiting the indiscriminate use of these weapons which cannot be directed against a military objective. Paragraph 8a of the final text now states that:

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[108]CCW, President's Text, January 1996, 3.

> ...In a case of doubt as to whether an object which is normally dedicated to civilian purposes, such as a place of worship, or a house or a dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used;...[109]

Thus this expansion actually gives the benefit of the doubt to the humanitarian side. Paragraph 8 of the President's Text (Paragraph 9 of Amended Protocol II) also makes another important clarification in that "Several clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects cannot be treated as a single military objective."

This is an important distinction, as it means that an entire area can no longer be treated, conveniently, as a military objective. The concept of feasible precautions to protect civilians from the effects of these weapons is spelled out. For example, Paragraph 10 of the final text defines the circumstances of what constitutes feasible precautions:

> (a) the short-and long-term effect of mines upon the local civilian population for the duration of the minefield.
> (b) possible measures to protect civilians (for example, fencing, signs, warning and monitoring);
> (c) the availability and feasibility of using alternatives; and
> (d) the short and long term military requirements for a minefield.[110]

In the midst of hostilities there may not be time to consider these options, or else they may be conveniently ignored. Still, they do provide some sort of framework for what feasible precautions should entail. Finally, the Review Conference did introduce a new protocol on the use of laser weapons. Although both the ICRC and Sweden pressed very hard for it during the preparatory conferences, it was

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[109] Article 3.8 (a) of the CCW, Amended Protocol II, (May 1996).
[110] Article 3.10 (a) to (d) of the CCW, Amended Protocol II, (May 1996).

deemed subordinate to the work of revamping the mines Protocol. Therefore, the addition of a laser protocol was seen as a surprising but welcome step in the control of another anti-personnel weapon.

The results of this review process are disappointing to some, but to most pragmatists, they are not surprising. Changing the scope of the Convention to include internal conflict is a significant improvement, but if no means exist to verify the misuse of land mines, then the seriousness of the treaty is called into question. By legitimizing the high technology mines, the use and acquisition of these mines will be encouraged. In turn, states which possess or produce "dumb" mines will perceive themselves as victims of discrimination. In addition, the phase-in period for retrofitting or changing stockpiles still allows for "dumb" mines to be used. Much stricter restrictions on the use of remotely delivered mines now exist. They will not blight the landscape forever, as did their older predecessors. But as one observer points out:

> U.S. delegates fought hard for the new protocol on the grounds that it would lower civilian casualties, but this is by no means guaranteed. Modern mine systems can distribute thousands of mines in minutes. The notion that a village that has been blanketed by mines is somehow "safer" because they may deactivate within four months is hard to take seriously.[111]

The Conference Chairman, Johan Molander of Sweden, has summed up the results of the Conference as the "lowest common denominator...[but] an honest compromise."[112]

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[111]Iain Guest, "Revised Agreement is no Victory in War Against Land Mines", *International Herald Tribune*, 4 June 1996, 8.

[112]James Barry, "At Least 50 Nations Agree To Limits on Land Mines", *International Herald Tribune*, May 3, 1996, 1

There was hope that the growing international land mine ban supported by over forty states and numerous NGOs and international organizations would have tipped the scale in favour of a total ban. The review process has exposed weaknesses in the argument that these weapons can be used responsibly. Although it may be a more practical option to completely prohibit these weapons (instead of having complicated rules on the use of particular mines under certain circumstances), it still takes time politically for all states to reach agreement. There is talk of an eventual ban, possibly for the next Review Conference in five years' time. In the meantime, mere restrictions will not be enough.

The revamping of the Conventional Weapons Convention has proved to be difficult and contentious. Nevertheless, the Convention has finally found the notoriety it has sorely needed in the last decade. It has opened up a virtual Pandora's box of issues dealing with restrictions on land mines. It has scrutinized both the strong and weak points of humanitarian law and related them to a specific weapon system. It has placed on the world stage the contest between military necessity, humanitarian need and political will. It has also forced states to re-examine their policies. Most important, this process has brought the restrictions and prohibitions on weaponry based upon humanitarian principles back into the limelight regarding how weapons should be controlled. Perhaps, ultimately, the entire process of revamping such a treaty will be to no avail. Lives will certainly be saved, but probably not enough of them. What this complicated process does show, however, is that partial restraints on the use of land mines may not be

enough; ultimately, a total ban on all anti-personnel mines may be the only effective solution.[113]

[113] An important analogy can be found in the case of chemical weapons. George Reid ponders what the world would be like if there were only partial restrictions on chemical weapons, like the current restrictions on land mines: "Mustard gas was banned forever in 1925 because it was evil, indiscriminate, broke the rules of war, and caused undue suffering. If current Geneva rules had applied then, we would have had proposals to colour it purple, blow whistles and sound sirens when it was launched. See George Reid, "No Halt Sign for Massacres in Slow Motion", *The Scotsman*, 18 April 1996, 17.

Chapter VI

Conclusion

These two case studies of the evolution of restraints on chemical weapons and land mines illustrate what an incredibly complex and difficult task it is to place legal prohibitions on the use of weapons, let alone orchestrate their abolition. The threat or perception of threat that these weapons pose to international security, and the depth and assortment of responses they evoke, are distinctive to each weapon. Even so, the result of both processes may ultimately be the same. To a certain extent these differences can be attributed to the circumstances of the time, but even more important, there are certain inherent causal factors in each case which influence the two arms control processes differently. To limit or remove weapons from the arsenals of most states, a variety of interests must be taken into account.

Primary to these interests is "national security", and armaments are acquired to protect it. The perception of national security is not always homogeneous, as political, military, economic, and social factors may compete with each other regarding what issues are considered important to national security.[1] Moreover, other states in the international system often have differing security concerns. As a result, states have to seek, and find, a common ground in terms of arms control. The purpose of this section is to sum up the main similarities and differences in responses to chemical weapons and land mines, in order to understand what criteria are necessary for prohibiting a weapon system.

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Section 6.1-Criteria for Comparison Between Chemical Weapons and Land Mines

Section 6.1.1-Distinctive Histories

Both these weapons have had distinctive histories. Attempts to abolish chemical weapons have historically been much stronger, more consistent, and indeed longer-lived than those for abolishing land mines. Restraints and prohibitions against poisons stretch back for centuries. For modern chemical weapons, the Geneva Protocol of 1925, banning the first use of chemical weapons, was an important normative precedent that has survived mostly intact. In addition, many states have pursued policies of self-restraint either by renouncing the use of chemical weapons on their territories; abandoning their chemical warfare programmes; or entering into bilateral arrangements. Counterbalancing this trend, other states and even non-state actors have sought to acquire chemical weapons, further hindering global non-proliferation efforts. To counter this threat, the international community joined together under the auspices of the Australia Group to restrict access to the trade in chemical agents needed to produce chemical weapons. Finally, although it took almost 20 years of arduous negotiations to produce the Chemical Weapons Convention (CWC) of 1993, the treaty is fitting in time and place as the logical sequel to the Geneva Protocol of 1925. The only way to effectively guarantee the non-use of chemical weapons was to secure an agreement that prohibited the production, stockpiling, and development of these weapons, and required the destruction of current stockpiles. Firm verification and

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[1] Julian Perry Robinson, Chemical Warfare Arms Control: A Framework for Policy Alternatives, Stockholm International Peace Research Institute (SIPRI), (London and Philadelphia: Taylor & Francis, 1985), 27-28.

enforcement measures were included in this treaty to assure that this task was fulfilled.

In contrast, there is a much shorter history regarding restraints on land mines, although they constitute a weapon system that has been in existence almost as long as chemical weapons. With the exception of World War I, land mines have also been used with much more frequency and intensity than chemical weapons. The regularity and indeed the ordinariness of their use essentially legitimized land mines; for many years this seeming ordinariness prevented full-fledged demands for their restraint. To some extent, this is attributable to a long-standing reluctance by most states to place restraints on conventional weapons. It was not until the end of 1970s that any sort of action was taken to restrain land mines. During the decade, there were debates about which conventional weapon systems should be subject to restriction. As a result, Protocol II of the Convention on Conventional Weapons (CCW) restricts the use of land mines under certain circumstances. There is no agreement banning mines as a complete weapon system, which occured in the case of chemical weapons. In the last few years, however, motivated by public pressure, there has been an abundance of interest in regulating and abolishing land mines. Some states have taken one small step towards this goal by unilaterally renouncing the possession, use, and production of land mines. Others states have been observing an international moratorium on the export of mines, and groups of states have discussed establishing an export control regime for land mines. A large group of states has even joined forces with other actors in the international system, such as NGOs and international organizations, in the anti-mine campaign. The land mine control/disarmament issue has now

been upgraded from its IHL treaty status and placed on the Conference on Disarmament agenda. Canada has also called for a new treaty prohibiting land mines to be negotiated in December 1997, independently of any official disarmament forum.

Section 6.1.2-Nature of the Threat

In terms of threat analysis, it would initially appear that land mines and chemical weapons have little in common. Chemical weapons are widely perceived as weapons of mass destruction and land mines as common, even ordinary conventional weapons. Therefore, it would seem that their respective capacities for destructiveness would be vastly different. Certainly if chemical weapons were to be used in a strategic capacity against unprotected civilian areas, casualties would be enormous. Thus far this has yet to occur, but it is not out of the realm of possibility. Land mines are not a strategic weapon system, and it is doubtful that they could alter local balances of power. The communities effected by these weapons are different as well. Land mines are no longer a hazard only to military forces. Because of remote delivery dissemination techniques, mines are deployed on a massive scale all over the countryside, interfering with crucial infrastructures and placing mainly civilians at risk. As a result, mines have become the weapon of choice in low-intensity conflicts, causing environmental contamination and preventing poor, rural societies from recovering from the effects of war. In

contrast, it is the military community that has been most affected by chemical weapons.[2]

The nature of the injuries and casualties from these weapons have some common threads. Injuries and casualties emanate from the anti-personnel nature of the weapon; these weapons both inflict horrendous and lingering injuries, and they cannot distinguish between a combatant and non-combatant. While chemical weapons have always been considered inhumane, there is still much disagreement in classifying land mines the same way. Part of the reason is that the ill effects of land mines are attributable to the hazards of war and the misuse of these weapons, while the effects of chemical weapons are a result of their correct usage. On balance, however, land mines have been responsible for much more carnage than chemical weapons, a fact which is directly related to land mines having been used with such frequency and intensity.

Section 6.1.3-Comparative Perceptions of Military Utility

One of the most important subjects for comparison and analysis is the role of military establishments in the restraints on weapons. The perceived military utility of a weapon is crucial to any decisions to restrict, ban, or relinquish it. While the

[2]Certain militaries maintain anti-chemical protection equipment, but civilians are unlikely to have these defences. Civilians may have been caught in the wake during cases of alleged use since World War I. In terms of civilians being specifically targeted by these weapons, the only recent case is that of Iraq's attacks on the Kurdish population at Halajaba. During the Iran-Iraq War in which chemical weapons were used, main civilian population centres were not targeted. In addition, in the Tokyo subway attack, a non-state actor targeted civilians in a terrorist attack. Although civilians have been victimized by chemical weapons, to date chemical weapons have been primarily a military threat. There is the fear, however, that in the future the primary threat may shift to targeting civilians.

military disdain for a weapon may be a crucial first step in accepting restrictions or prohibitions on it, this is still not enough. Military establishments are supposed to protect the national security interests of the state, and therefore, they must balance the operational utility of the weapon in question against their own preferences or reservations. Historically, the role of the military establishment in its responses to chemical weapons and land mines has been quite different, although recently the differences between them seem to be closing.

Chemical weapons have always been treated with disdain by military establishments. They have been widely viewed as the weapons of armies without honour. Still, this did not preclude armies from retaining these weapons as insurance against attack. In other words, strategists felt that chemical weapons, however abhorrent, served a useful deterrence purpose when the enemy's 'honour' could not be relied upon. Over time, however, specialists began to question the operational utility of chemical weapons with the emergence of doubts that these weapons would ever be used, even in retaliation. Moreover, anti-chemical protection gear could be used to lessen the impact of any offensive chemical attack. Because these weapons were cumbersome, unpredictable, and possibly a hazard to one's forces, they were not considered weapons assuring the security of the state. Since they also were not a frequently used weapon, this infrequency became analogous with their lack of military utility. Consequently, the military hierarchy eventually resigned itself to the fact that these weapons could be forsaken without damaging security interests. In addition, chemical weapons which utilized turn-of-the-century technology could now be replaced by "smart ordnance" that was more effective and precise.

To complicate matters, East-West strategy and perspectives are not the only ones which matter. While most states would question whether they could win a war with chemical weapons, weaker states with fewer resources may perceive them as desirable, or even the next best thing to nuclear weapons. Perceptions of the military utility of chemical weapons will vary according to the security requirements of particular regimes. Also, non-state actors such as terrorist organizations which do not conform to the operational utility requirements of most military units may seek these weapons because they suit their particular needs and objectives much better. As long as some militaries or other bodies see some advantages in possessing chemical weapons, they will still seek to acquire them even in lieu of a world-wide ban.

In contrast, the frequency and enthusiastic use of land mines suggests that military establishments viewed mines as a viable and legitimate weapon system. For the most part, that has been true. Military strategists are quick to point out that it is the misuse of these weapons which cause problems, and that if used correctly, civilians would not be adversely affected. Traditionally, soldiers have had to take their chances with these weapons; the military establishment has never viewed land mines with as much disdain as chemical weapons. Recently, however, there has been dissension within military ranks regarding both the humanity and utility of land mines; disagreements have occurred between military commanders in the field and military planners. Those who have first hand experience with mines in action are appalled by their devastating impact to both soldier and civilian.

In response to the burgeoning land mine problem, military establishments around the world are reassessing the operational utility and need for land mines—much more so than with chemical weapons. There are certain conditions which, on the surface would seem to indicate that the militaries could relinquish the land mine option. Land mines have never been perceived as crucial to strategic stability; likewise, the outcome of wars would not be decided by land mines. The ICRC commissioned a study by high level military officers on the operational utility of land mines and came to the following conclusion:

> ...[T]he use of anti-personnel mines in accordance with law and doctrine is difficult, if not impossible, even for modern professional armies. This shows that the indiscriminate effects of landmines cannot be contained in most cases. Further it was found that the military utility of such mines is most often negligible or even counterproductive for the layer.[3]

As it is debatable whether mines are operationally useful, one would think that militaries would be more willing to relinquish these weapons. To date, as the worst mine damage has occurred in the Third World, it would also be logical that if mines are not used in great quantities in the Western context, then why not forgo them? In addition, Western militaries are increasingly being exposed to the perilous nature of land mines during peacekeeping or humanitarian missions in areas of conflict, and as David Gowdey observes:

> [L]and mines are the second largest cause of casualties to interventionary forces—UN or coalition forces. In Kuwait, Somalia, the Former Yugoslavia, Rwanda, etc., significant numbers of the soldiers of big powers have been killed

[3] This study was endorsed by 52 senior military commanders from 19 countries. See Statement by the ICRC to the United Nations General Assembly, 51st Session, First Committee, Agenda items 71 and 75, "General and Complete Disarmament Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects", New York, 18 October 1996, 2 (Hereafter ICRC, "General and Complete Disarmament", October 1996). There have been other studies or assessments by military establishments/ think-tanks/ leaders which call for the abolition of land mines. For example, an open letter to President Clinton was sent to *The New York Times* by a dozen retired generals calling for a complete ban on land mines.

> or wounded by land mines. Whether this is sufficient to make them want to limit their use in the Third World is open to debate, but I do know that the U.S. military was more willing to listen to our views on the issue after Kuwait and Somalia than they were prior to the operations. [4]

Despite these drawbacks of land mine use, many military planners still insist that mines have a legitimate military function; that to completely abolish their use would be foolhardy as long as others retain them. More important, there are no other alternatives which would replace the function of land mines as protectors of borders or de-militarized zones.[5] States situated in these areas, or in control of them, regard mines as crucial to the security of the area. Therefore, while chemical weapons could be replaced by smarter and more precise weapons, the same criteria does not necessarily hold true for land mines even though they are very basic and unsophisticated weapons. It is no coincidence that militaries which have refused to forgo the land mine option, and especially the non-self-destructing mine option, are the ones situated in areas where mines are needed for this protective function.

Thus far, some militaries have renounced the use, production, transfer, and stockpiling of land mines, while others have pursued more ambivalent policies by calling for their eventual elimination. Complicating this situation is the fact that mines have become the weapon of choice in many low-intensity conflicts throughout the world, and armies in these regions may not be willing to relinquish these inexpensive, low-technology weapon systems. To ask these armies to give up their stocks of "dumb'' mines in favour of "smart" mines is simply not

[4] Author's written correspondence with David Gowdey, then Demining Consultant to the United Nations Department of Humanitarian Affairs, (February 1995).

conceivable or desirable for many militaries. In conclusion, the military perceptions about the lack of utility of land mines are not homogeneous—unlike the case of chemical weapons in which militaries have concluded that they could forgo that weapon option.[6] The fact that there is dissension, however, and that momentum is building against land mine use will most likely shift the balance in favour of a ban.

Section 6.1.4-The Institutional Process

Another factor that carries repercussions for weapons controls is the institutional process of weapons production, planning, and development. In this institutional process or the so-called military-industrial complex, "Specific military missions of the armed forces are institutionally coordinated with administrative segments of the civilian and military administration, with research and development laboratories, and with the production plants for weapon systems."[7] The prospects for arms control are therefore tied not only to the perceived military utility of a weapon, but also to the armaments dynamic itself. In the case of chemical weapons, Julian Perry Robinson argues that:

> During World War I, the waging of CW required each belligerent to create a supporting infrastructure of R & D establishments, headquarters, directorates, CW-speciality service commands, production capacity and the like. New

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[5] Mines in these areas need to be non-self-destructing as they are designed to prevent incursions across these areas. Although this technology is very basic, thus far no alternative solutions have been found to replace land mines in this particular capacity.

[6] A note of caution is in order. Although most militaries have intrinsically disliked chemical weapons, they remained divided for a number of years over whether chemical weapons had an important military or operational utility. Thus, it should be remembered that it can be a long and complicated process for military establishments to decide whether a weapon has an important operational utility. Decisions are also influenced by the circumstances of the time.

[7] See Dieter Senghaas, "Arms Race Dynamics and Arms Control", in Nils Gleditsch and Olav Njølstad, (eds.), Arms Races Technological and Political Dynamics, International Peace Research Institute (PRIO), (London: Sage Publications, 1990), 18.

> institutions thus came into existence; and because they were highly specialized, the livelihood, ambitions and career patterns of their occupants inevitably became intertwined to some degree with their special mission. They thus acquired a self-propagating character....it was thus virtually inevitable that part of the across-the-board increases in military appropriations should come to revitalize moribund chemical-weapons programmes: though the military logic might be weak, the institutional logic was strong.[8]

The institutional infrastructure and the specialized nature of chemical armaments policy cannot be dissolved overnight. Therefore, although important players may agree that these weapons should be banned, the self-perpetuating nature of the chemical weapons institution can hinder any efforts to disarm. The time lag between the Geneva Protocol of 1925 and the Chemical Weapons Convention of 1993 indicates just how difficult it has been to wind down the chemical weapons-armaments dynamic. Even while negotiations were well underway for a disarmament treaty, some states were still considering the modernization or reinvigoration of their chemical option. Chemical weapons were still institutionalized into operational planning. There are also practical problems associated with the institutional process, as "...any interruption of the work in these institutions is considered intolerable by the political and military elites, due to the long lead-time requirements of modern weapon technology."[9] Disarmament has been held at bay for the simple reason that special, institutional interests and planning take a long time to be phased out.

Like most weapons, land mines are integrated into future military planning and force structures. As a result it may be difficult at least initially, to renounce them

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[8] For a discussion of the institutional origins of CW armament policy see Julian Perry Robinson, op. cit., (1985), 41-45. Dieter Senghaas also takes a similar position to Robinson by pointing out that arms control tends to be more successful if there is also some control over the institutional process. See Senghaas, op. cit., in Gleditsch and Njølstad, (eds), 25.

[9] Senghaas, op. cit., in Gleditsch & Njølstad, (eds.), 20.

as a weapon system. This may be why some states are willing to institute national moratoria on these weapons, but not to renounce them outright, while they study the situation. They need to know that either another weapon can replace the land mine functionally, and that operational planning can be adjusted to exclude the land mine option. In contrast to chemical weapons, the institutional attachment to land mines has not been very powerful. There simply are not as many institutional infrastructures or specialized interests associated with these weapons. In addition, there are no harmful effects linked to the destruction of land mine stockpiles, unlike chemical weapons, where the process of destroying them can be dangerous if done incorrectly. In practical terms, this means that there should be fewer institutional obstacles in the way of abolishing land mines. Should military establishment conclude that these weapons no longer serve an operational purpose, then there probably will be a much quicker pace towards disarmament. In the last few years alone, certain states have already managed to shut down their land mines-armaments dynamic.[10]

Section 6.1.5-Verification

There are also substantial differences between the verification and implementation mechanisms between the chemical and land mine regimes. "Verification has often been regarded as the crucial element in arms control, implying that agreements that are not 100% watertight in terms of detecting cheating are of dubious

[10] Many of these states are those which support a full ban on land mines. Some of these states began with a moratorium on the use and export of mines, but many have gone further and destroyed existing stockpiles. In some states, land mine programmes had already petered out, so destroying any remaining mines may have been a logical conclusion.

value."[11] The CWC, for example, has some of the most extensive and intrusive verification mechanisms ever found in a treaty; in contrast, the CCW has none.[12] Critics have argued that the CCW would be difficult if not impossible to verify because mines have already proliferated in such vast numbers that they would be impossible to trace. Because mines are such small weapons, they can easily be hidden. Land mines are also simple to produce, or mass-produce. While this may be a valid argument, it should also be remembered that initially, it was thought that a chemical weapons regime was unverifiable because of the complexities of dual-use chemicals. Critics of the CWC still may insist that the regime is unverifiable. The fundamental difference between these two weapons systems is that it is far more difficult to achieve verification in partial disarmament regimes than in full disarmament regimes. Verification can sometimes be a complex process, but it still remains far simpler to verify that an infraction has occurred if the weapons is banned in its entirety, rather than banned under specific circumstances.

The problem with taking land mines seriously as an arms control or disarmament issue is that if no one attempts to verify that agreements are being followed, or that consequences will be levied against those who do not observe the rules, then there is a great temptation to break these rules. If the prospects for verification appear weak or problematic, then the international community might not wish to pursue any further restrictions or prohibitions on these weapons. Conversely, treaties may

[11] United Nations, *The Unfinished Disarmament Agenda*, Disarmament, Special NGO Committee for Disarmament, Geneva, February 1995,

[12] In the review process of the CCW, parties lobbied hard to include verification and compliance measures in the revised treaty, but other factions absolutely refused to include these measures in the amended treaty.

be negotiated to be deliberately weak, if there is no serious interest in restricting these weapons. The issue of verification can be used as a political cover for not advocating or promoting disarmament treaties.

Section 6.1.6-Perceptions of Political Utility

As Senator Patrick Leahy quotes *The Washington Post* in a recent editorial:

> A simple renunciation of land mines would give the United States a strong platform from which to persuade others. But in the end, things must come to a table. Diplomacy seems a wickedly sluggish way to tame the bloody scourge of land mines, but a necessary way.[13]

Politics in the form of diplomacy is one of the most important elements in the arms control decision-making process. Weapons that are prioritized on the international political or diplomatic agenda are more likely to be prioritized on the arms control agenda. The political circumstances of the time, among potential signatories, may be the key to concluding weapons control agreements. Currently, both land mines and chemical weapons are rated high on the international diplomatic and arms control agendas. Politicians in democracies are also responsible to public demands and must work with their military establishments to resolve any disputes between humanitarian and security concerns. Politicians must also rely on their military advisors to explain the benefits or drawbacks of signing on to an arms control agreement. To facilitate these agreements, politicians are obligated to find a balance between public interests and core interests which involve protecting the security of the state.

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[13] "Tale of Two Treaties", *The Washington Post*, April 14, 1997 as quoted by Senator Patrick Leahy, in a letter titled "Treaty for Land Mines", in *The Washington Post*, April 27, 1997, C6.

Chemical weapons remained in the realm of superpower politics for many years. Most major arms control agreements had to include these powers if they were to be successful. The progress of the Chemical Weapons Convention (CWC) was directly related to the improved political atmosphere between East and West. States which stayed outside this regime risked being classified as political pariahs or rogue regimes; therefore, politically, joining the CWC was a pragmatic choice. In addition domestic politics has also played an important role in treaty implementation. For a treaty to become operational, it must be ratified, and in some states, bureaucratic politics can impede the process.[14] The ratification process has been especially problematic in the United States and Russia. Political dissension within national governments hinders disarmament measures, even if official negotiators have agreed to abolish a particular weapon.

Originally, land mines were not ranked high on the international political agenda. They were never part of the strategic, bilateral arms control process, partly because they were not seen as a major weapon system that could affect East-West balances. As a result, the CCW was not negotiated in an official disarmament forum. From the beginning, the establishment of the CCW was negotiated in a multilateral environment, with the full participation of the major powers but without much enthusiasm. The improvement in East-West relations did not suddenly set the stage for co-operation in restricting land mines, but it enabled players large and small to turn attention to other conflicts throughout the world

[14]Ratification has been stalled in the U.S. Congress over two main issues relating to the CWC: the opinion that the CWC is non-verifiable; and the CWC will not stop non-signatories from developing chemical weapons. The United States has a reputation for conducting a slow ratification process. For example, the Geneva Protocol of 1925 was not ratified for almost fifty years.

and to the types of weapons being deployed. Previously, the use of land mines did not gain much attention politically because it was not considered to be crucial to the core interests of the major powers; the land mine crisis was seen as a peripheral problem occurring mostly in poor Third World countries. Politically, even for the major powers, it is now an issue that can no longer be ignored. Political responses to the public interest seems to play a much larger role in the current drive to control land mines than it ever did in the case of chemical weapons. As land mines are viewed primarily to be a humanitarian problem, governments gain a great deal of political mileage by calling for a ban or an eventual ban. Public relations and media campaigns have successfully brought the land mine problem to a high point on the international diplomatic agenda. As a result, governments now have to respond in some manner rather than ignore the problem. As David Gowdey explains it:

> In the case of the democracies, public pressure has caused states, most notably Britain, to redefine their interests on this issue. They need to be seen to be doing something about these horrible weapons that kill babies and women, so that their electorate, who have been galvanized on these issues, will not turn them out of office.[15]

Politically, the land mine crisis has shifted from a peripheral problem to one garnishing a great deal of political interest.

Land mines are also a contentious issue politically, with some distinctive North-South cleavages. As land mines are a low-technology weapon system, it is not difficult for any state to gain access to them. There is often resentment by some states that other powers are trying to dictate what type of weapons they may retain. Also, some Western states are criticised for retaining the so-called "smart" mines.

reducing the efficacy of their more lowly opponents' "dumb" mines. This policy is usually viewed as hypocritical. Still, the political costs of remaining outside any land mine control regimes is not as high as those for chemical weapons. Therefore, in the case of land mines, it may be harder to encourage restraint.

Section 6.1.7-The Role of Particular States and Institutions

Particular states, institutions such as disarmament forums, as well as non-state actors, namely international and non-governmental organizations, special interest groups, and the media all have a role to play in the development of the CWC and CCW regimes. The quest for a chemical weapons ban has been confined primarily to the official disarmament forum, the Geneva based Conference on Disarmament, but the driving force behind this treaty has been from superpower collaboration. Although chemical weapons were abhorred almost universally by most parties whether civilian or military, no other specialized institutions were involved with the exception of the International Committee of the Red Cross. There have not been any lobbying groups, citizen or media campaigns working towards the elimination of these weapons. For example, anti-nuclear lobbies have orchestrated massive demonstrations world-wide, but this simply has no parallel in the case of chemical weapons. Chemical weapons were not an issue that greatly aroused the emotions of the general public. This reaction is understandable as there was no ongoing crisis with these weapons that horrified the public conscience (which occurred in the case of land mines), and these weapons were unlikely to cause world destruction (like nuclear weapons). Recently, in the wake of the Gulf War

[15] Author's correspondence with David Gowdey.

and Tokyo chemical subway attack, and the problems of the CWC ratification, chemical weapons have been given more attention in the media. But this media attention has not really been about advocacy, instead it focuses more on public debate over chemical disarmament issues.

The CCW review process has been orchestrated through the UN in a truly multilateral fashion, but not in a traditional arms control forum. Even more recently, the land mines issue has been elevated in importance and moved to an official arms control forum, The Conference on Disarmament, where the CWC was negotiated.[16] In contrast to chemical weapons, there has been a massive international anti-land mine campaign orchestrated through the media, international institutions and advocacy groups. This is perhaps understandable, as the anti-land mine campaign arose directly from a humanitarian threat to civilians created by anti-personnel mines. The United Nations, and the ICRC, the lead agencies of the anti-mine campaign, participated in the CCW review and preparatory conferences with observer status. The enormous public pressure to ban mines was embodied by the International Campaign to Ban Land Mines (ICBL), which is compromised of over 650 NGOs in over 40 countries. Thanks to these public pressure campaigns, states were made aware of the land mine problem if only from the bottom up, and began to re-examine their own policies.

[16]While it is an important move politically for the land mine issue to be elevated to an official disarmament forum, it may not be a good move in practical terms as contentious issues can sometimes be buried by the negotiating process. Senator Patrick Leahy has complained that in the U.N. Disarmament Conference, "...any one holdout can and will block action indefinitely." See Leahy letter to *The Washington Post*, op. cit., C 6.

What is perhaps unique to the land mines eradication campaign is that states have also been shamed by outside actors into taking action, and have joined in the anti-land mine campaign. Initially, the role of the state was rather cautious, with the United States taking the lead in introducing moratoria and calling for the eventual elimination of all land mines. But at the present time, the United States has not actually agreed to a total ban on all land mines. Unlike the chemical weapons issue, which was superpower-oriented, the drive to ban land mines has been orchestrated by a more diverse group of states (outside any formal negotiating bodies) with Canada emerging as the leader. Currently 50 states comprising the Ottawa Group (including many NATO members) are committed to the elimination of land mines.[17] Through this process, the roles of outside actors such as international organizations, NGOs, media organizations, and those of individual states have been fused in a commonality of purpose.

Section 6.1.8-Commercial Influences

Commercial interests and economic gain have often if not usually been blamed for the proliferation of weapons especially in the conventional arms trade. In the wake of recent military downsizing in many countries, the arms trade has been described as a buyer's market. If this is the case, then do the conditions of international military trade influence arms control efforts? For the most part, the regulation of chemical weapons and land mines has been affected very little by

[17]An "Agenda for Action" was declared at the Ottawa Conference in October 1996. The Canadian initiative stressed how moral and political leadership can end the land mine crisis; the global prohibition and elimination of land mines should be implemented initially, at the national and then regional level; Foreign Ministers are to be invited to Ottawa in December 1997 to negotiate a new

commercial interests; in fact, commercial concerns may encourage adherence to control agreements. There is no legal trade in chemical weapons *per se*, but there are very large multinational chemical and pharmaceutical industries from which the means to make chemical weapons may be drawn.[18] One of the arguments against prohibiting chemical weapons was that it would be impossible to verify diversion of chemical dual-use technology to weapons development. It was always felt that intrusion into the affairs of the chemical industry would have serious repercussions for international trade and development. This argument became outdated when the chemical industry began to advise and participate in the chemical weapons negotiations process. With the co-operation of industry it then became possible for verification provisions to be implemented as required by the CWC. Banning chemical weapons would not adversely affect the economies of most states, but if a state chose not to comply with the CWC's provisions, it would eventually be excluded from the lucrative international chemical trade. In addition, the chemical industry as a whole was compelled for practical reasons to co-operate, as significant penalties would be levelled against those firms or individuals found to be involved in the illegal chemical trade. From a commercial standpoint, therefore, it is in the interest of most states to co-operate and to agree to the terms of the CWC.[19]

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treaty dedicated to a full ban on land mines. ICRC, "General and Complete Disarmament", (October 1996), 2.

[18] For example, during the early 1980s Western firms were severely criticized for aiding the development of chemical weapons programmes in regions of concern. To make sure this did not continue, tighter controls and laws were established.

[19] There is also the opposing viewpoint that the chemical industry would be compromised by intrusive verification which might lead to the theft of sensitive commercial secrets. This issue received much attention during the CWC negotiation and ratification process, but this has become a rather moot point to states that have already acceded to the treaty.

Unlike chemical weapons, land mines have been part of the regular military trade for years. But land mines are not big-ticket items, as most manufacturers do not specialize exclusively in the production of land mines. For most modern economies, the loss of this type of military sale would have minimal impact, thus creating a more favourable economic environment for a land mine ban. Bad public relations incurred by companies selling land mines or land mine components would further spur an end to the sale of these weapons. As Joost Hiltermann argues: "Companies are sensitive: they are concerned about public relations. Land mines are usually a very small component of weapons manufacture. Companies can easily stop producing without losing a lot of money."[20]

Therefore, it makes more sense for manufacturing companies to agree to and to follow restrictions. But, poorer states may not be willing to relinquish their niche in this market especially if they retain large stockpiles of "dumb" mines. They may not want to pay the price to replace or retrofit these mines. Furthermore, some wealthier states reserve the right to sell high technology mines even if they no longer produce the low technology versions.[21] As a result, even though in most economies mines are not a huge industry in themselves, to some parties economic interests. however small they may be, may conflict with the ideal of a ban.

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[20] Comments of Joost Hiltermann as found in "The Land Mines Crisis Humanitarian Disaster: What Can be Done?", Forum held at the United Nations, 16 November, as reproduced in *Ending Reliance on Nuclear and Conventional Arms*, Disarmament, (New York: United Nations, 1995), 130.

[21] Poorer states have accused richer states of being hypocritical in policy, in calling for a ban on low technology mines while they continue to profit from sales of high technology models.

Section 6.1.9-The Role and Impact of Stigmatization

Both politically and economically, the stigmatization of these weapons has had an important impact on the degree of controls placed upon them. To warrant disarmament, there must be something terrible about the weapon on humanitarian grounds. Very few weapons are classified in this manner. Still, chemical weapons, along with nuclear and biological warfare, have always conjured up horrific images. The stigmatization of chemical weapons has been consistent and cohesive at least in the Western context, and originates within the Western military establishments from their experiences with chemical warfare during World War I. In fact, throughout history, poisons as a method of warfare have been condemned.

There was no stigmatization of land mines when they were first introduced as a weapon system. In contrast to chemical weapons, mines were viewed as legitimate weapons; as a result, only certain uses of mines have been restricted. Recently however, mines have become rapidly stigmatized because of their devastating impact on the civilian sector. As one observer has noted, "Weapons are not stigmatized generally, but land mines are increasingly stigmatized as weapons that are particularly nasty."[22] This has been in direct response to the heightened awareness of the land mine crisis world-wide in which many anti-mine humanitarian and advocacy groups have taken an interest. As one commentator has observed:

[22] Hiltermann in UN Land Mine Forum, 130.

> This campaign has been so successful that the image of an amputee now evokes the same revulsion and anger once reserved for those of Hiroshima victims or soldiers blinded by mustard gas in World War I. The goal is simple: to put land mines on that select list of weapons, with the nuclear bomb and chemical arms, that are so indiscriminate and uncontrollable that the only solution is their total elimination.[23]

Land mine ban advocates have increasingly placed land mines in the same category as chemical weapons, hoping that such a powerful stigmatization could also work to achieve an eventual ban. When this sort of categorization and thinking fully pervades military establishments, and all anti-personnel land mines are branded as intolerable, then a ban will be very realistic goal.

Section 6.1.10-The Role and Influence of IHL

The role and influence of international humanitarian law in establishing restraints on these two weapon systems also presents an interesting comparison. IHL is not simply an interplay between humanitarian considerations and military necessity; the necessity of the weapon in question is considered along with political, strategic and economic factors in deciding whether the humanitarian option should prevail. IHL may be a less ambitious approach to restricting weapons than traditional arms control, but it has the value of identifying and restricting the type of weapons that require controls. The importance of IHL is that it can be used as a yardstick for measuring the humaneness of a particular weapon, and can stigmatize the weapon in question. Unfortunately when IHL rules on the use of weapons are violated,

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[23] Iain Guest, "Revised Agreement is No Victory in War Against Land Mines", *International Herald Tribune*, June 4, 1996, 8. In an open letter to the President Clinton published in *The New York Times*, a group of retired generals favouring a complete ban also stated that "They [land mines] are in a category similar to poison gas". See the *International Herald Tribune*, 5 April 1996, 1.

this clearly indicates that the parties involved cannot be depended upon to use these weapons correctly.

In the case of chemical weapons, the influence of IHL has been extremely important. Poisonous weapons incurred humanitarian restraints long before they were classified as chemical weapons in the modern context. Soldiers will use whatever weapon might give them an advantage, but when the weapon causes far more human damage than is germane or necessary for any perceived advantage, then it is time to re-think the necessity of the weapon. After the horror of chemical weapons warfare was demonstrated during World War I, states arrived at the common understanding through the Geneva Protocol that these weapons should never be used again. Part of the moving spirit behind this co-operation arose from the wider peace movement seeking disarmament, but it also had vitality because these weapons were perceived as too horrific to be used in war. It was also feared that the use of such weapons would spread to civilian areas.

For the most part the pledge not to use chemical weapons except in retaliation has been respected. Breakouts have usually occurred where players have no interest in such restraints, and perhaps because of lack of experience with chemical weapons warfare. It is important to stress that the Geneva Protocol is essentially a moral code of conduct; it contains no disarmament or verification measures. Even states which had not signed the Protocol are considered bound by it under customary international law. Once chemical weapons began to be perceived as weapons of mass destruction, the concept of prohibition moved into the realm of Cold War politics. The CWC, the long awaited successor to the Geneva Protocol, has been

hailed as a great step forward for humankind. Removing a weapon that is indiscriminate, excessively injurious to both civilian and combatant alike is in keeping with general humanitarian principles for making war more humane. Without the precedent of chemical weapons being prohibited under international humanitarian law, the prospects for chemical disarmament would have been made much more difficult.

IHL has focused attention on land mines through the regulation of the use of land mines under the Convention on Conventional Weapons, an IHL treaty. The current CCW review process has really only served to tighten the rules, but it has no way to really enforce them, which is perhaps the greatest failing of humanitarian law. Part of the problem is that land mines are perceived as legitimate weapons of war even under IHL, therefore, their use is only restricted, and not prohibited. Since the Geneva Protocol of 1925, IHL has not succeeded in prohibiting a weapon entirely. As a result, land mines have not been stigmatized as a weapon as were chemical weapons. This means that it may be more difficult to incorporate disarmament measures at a later date if the IHL restraints are not absolute.

The distinctions of IHL applications to these two weapons draw from perceptions regarding the nature of each weapon versus its effects. Chemical weapons have been widely held to be inhumane as the nature of the weapon is considered indiscriminate. The effects of these weapons on human beings, causing unnecessary suffering to soldiers and civilians alike, were considered disproportionate to any military advantage they may have provided. Although land mine injuries are just as horrific as those from chemical weapons, they have

not been classified as inhumane weapons. In fact, there was a reluctance under IHL to classify land mines as inherently inhumane; instead, attention has focused on restricting their use. In the case of chemical weapons, on the other hand:

> ...delegates to the diplomatic conference [that resulted in the Geneva Protocol] did not make a minute legal analysis of the effects of chemical weapons as compared with other weapons, or make a careful assessment of their military necessity as compared with the suffering they caused, but rather boldly stated that the use of these weapons was "barbaric" and "horrific" and therefore to be outlawed.[24]

Land mines only received attention when civilians began to be caught in their indiscriminate wake. Soldiers had to take their chances with these weapons. The ill effects of land mine use are usually blamed upon incorrect use of the weapon rather than on the weapon itself. What is happening in the case of land mines is that the nature and the effects of the weapon are inevitably linked, and as a result, IHL is being undermined. Currently, a reassessment concerning the nature and effect of these weapons, and the shift in thinking is now leaning more towards the perception that these weapons are in fact inhumane. For example, land mines cannot discriminate between civilians or combatants, this has become even more problematic because of the time-delay properties of these weapons. When entire civilian areas are blanketed by these mines, then the effects of these weapons may be disproportionate to the original military utility these weapons were intended to serve. Mines can also be seen as perfidious weapons because of their hidden qualities. Still, the primary problem with declaring these weapons inhumane is whether they can be considered excessively injurious, or causing unnecessary

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[24] "The Rationale for Amending Protocol II of the 1980 Convention, The Ways and Means of Improving Protocol II, The Military and Humanitarian Perspectives Concerning the Amendment of Protocol II", Group of Governmental Experts to Prepare the Review Conference of States Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, Background Documentation prepared by the ICRC, April 1994.

suffering to combatants as well as civilians. In the case of chemical weapons, virtually no one disputed that these weapons caused more suffering than was needed for a combatant's incapacitation. Currently, there may be sufficient agreement that the humanitarian consequences of land mines use are excessive in relation to their military utility. If these weapons were accorded the stigma of causing unnecessary suffering to combatant and civilian alike, then it would be much easier to place land mines in the same IHL category as chemical weapons.

Section 6.1.11-Partial Versus Comprehensive Disarmament Regimes

These two case studies also represent the degree of ease and difficulty in establishing partial or comprehensive disarmament regimes. The fundamental difference between these weapons is that the CWC has committed states to comprehensive disarmament, but the CCW requires only selective disarmament. From a practical and political stand-point, it is much easier to negotiate international agreements on partial restrictions of a weapon system. Full and comprehensive disarmament is a very difficult level of control to attain. The CCW review process has succeeded in banning only the use of the most injurious mines under certain circumstances, and parties have up to nine years to convert stockpiles. Arms control measures include a ban on the transfer of restricted or prohibited mines. The only mines that are banned outright are non-detectable plastic mines and mines with anti-handling devices. These distinctions between mine types complicate disarmament issues. By placing limits only on a particular type of anti-personnel mine but not on others, mines are legitimized as a weapon system. Moreover, selective disarmament cannot be as effective as total

disarmament because it is difficult to monitor. Any use, possession, or transfer of an illegal weapon would be a violation, but when certain uses and types of land mines are permitted, distinctions between legality and illegality will invariably blur. Selective disarmament may actually encourage more mine use as mines are still perceived as a legitimate weapon system.[25] Finally, selective disarmament may be more difficult to reconcile with humanitarian ideals. Despite these drawbacks to selective disarmament, most participants at the review process would agree that these restraints are a compromise—the best that can be achieved under present political circumstances.

Historically, comprehensive disarmament has been an elusive goal. The Chemical Weapons Convention, therefore, is a considerable achievement. The right political conditions and military judgements must be present before international agreements can be achieved. When the disarmament regime is not universal or is discriminatory, the co-operation needed to produce full disarmament agreements becomes even more elusive. The goal of comprehensive chemical disarmament became a realistic one when parties agreed to disarm with no exceptions or conditions. The benefit of comprehensive disarmament is that it is easier to enforce, because any detection of a chemical weapon deployment would be in violation, unambiguously. In terms of the land mine problem, comprehensive disarmament might be the more effective and desirable option, but realistically, selective disarmament may be the only option available as a short term solution.

[25] If mines are not completely renounced as a weapon system, then some combatants may take this as a green light to continue using mines, especially the high-technology mines.

Section 6.2-Some General Conclusions

A number of general conclusions can be drawn from this comparative study and they have repercussions for arms control in the Post-Cold War environment. The most interesting and perhaps striking difference between the two regimes is the selective disarmament for the land mines regime and the comprehensive or full disarmament in the case of chemical weapons. The question is why has this happened? What conditions must be in place before comprehensive disarmament could prevail over partial disarmament? First, there must be universal agreement that all uses of the weapon in question should be deemed illegal. There can be no exceptions; the weapon must be stigmatized absolutely, in political, moral, and military terms. If any disputes arise, then partial restrictions on the use of these weapons are unlikely to be transformed later into full disarmament measures. To date, the use of anti-personnel land mines as a weapon system has not been condemned, making it very difficult to negotiate a total ban. With chemical weapons, there was never any question about the inhumane nature of the weapon. Therefore, comprehensive disarmament vis-à-vis chemical weapons was an achievable goal, as evidenced by the current CWC.

The complete military renunciation of a weapon is also necessary for comprehensive disarmament to occur. Not only must militaries disdain the weapon in question but they must also conclude that its operational utility is marginal at best. As long as a military establishment believes that it needs a particular weapon, then it will not abandon it without a fight. In order to forgo a weapon it should either be substitutable or the function it serves, deemed no

longer important. This has to be a unqualified military viewpoint, and not the opinion of a select few within the military establishment. Another important factor affecting the prospects for comprehensive disarmament is the issue of verification and compliance. Any prudent strategist knows that it is unwise to relinquish a weapon unless it can be guaranteed that an adversary will do the same. The prospects for the CWC became more realistic when significant verification provisions were incorporated. The problem is that it is probably futile to negotiate full disarmament regimes if mechanisms for verification and compliance do not exist. This glaring deficiency is most likely what is impeding the creation of a land mine disarmament regime. The United States has indicated that it does not want to sign the Ottawa treaty because this prospective treaty does not include verification measures.[26]

These two case studies have shown just how important is the support of the military establishment when trying to establish weapons controls. With very few exceptions, military establishments have been united in their abhorrence of chemical weapons, as well as in concluding that these weapons were no longer crucial to national security. With the military firmly on board in support of a ban, it was then possible to abolish these weapons. More important, the military establishment was not involved in a tug-of-war with the political establishment, making it easier to establish a unified policy.

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[26] "Ban Mines Now", The Economist, May 24, 1997, 16. Instead, the United States feels that a treaty banning land mines would be useful only if all the major suppliers are in agreement and verification is included; therefore, the U.S. prefers approaching the issue of a land mine ban in the Conference on Disarmament.

Military support for the abolition of land mines by contrast has not been as forthcoming and opinions remain divided. There is not a strong military ethic against these weapons; for the most part, soldiers have had to take their chances with these weapons and accepted them as an occupational hazard.[27] Currently, some militaries even question whether mines are more than marginally useful. Because of these divergences in opinion among militaries and often within them, these establishments largely hinder rather than help in the drive toward a ban. The influence of military establishments can also stymie the political policy process. For example, United States policy on the land mine issue would, on the surface, seem dedicated to an international ban, but in reality it has been described "... as a struggle between a military determined to preserve certain mine options and a president reluctant to expose himself in a political campaign as commander in chief inattentive to the prerogatives of his troops."[28] Until, there is stronger and more unified support from the military establishment in favour of a ban it is unlikely that a ban will become a unified national policy objective.

Moves are now underway around the world to ban land mines in their entirety, like chemical weapons. Does this mean that humanitarian and security concerns can be reconciled in the arms control process? Or will security concerns always take precedence over the humanitarian ones? In the real world, even if a weapon is generally considered to be inhumane, states may hold on to them as long as they can, so long as they do not become a severe liability (operationally or politically). Although the use of chemical weapons has been banned since 1925, states still

[27] This does not mean that all parties within the military establishment necessarily approved of the weapon, but it was not as intrinsic or strong a dislike as that for chemical weapons.

retained them in their arsenals even though they ceased to have major military value to the major powers. Recently, however, new and renewed fears about the threat from these weapons have reinvigorated the quest for a total ban. Therefore, the humanitarian concerns and security concerns about these weapons could be reconciled as the major powers no longer needed these weapons, and could support the humanitarian argument as well as using it to stigmatize non-compliant actors.

In the case of land mines, these weapons are wreaking such havoc that the humanitarian consequences can no longer be ignored. Therefore, the circumstances of the time may be responsible for shifting the balance to favour humanitarian concerns over those of security. As a result:

> ...[T]here is now a need for land mines law to consider the next step, to consider not only the prohibition of use, as was in force for chemical weapons between 1925 and the beginning of the 1990s, but to consider the next step, which would be a ban on the production of those land mines.[29]

Humanitarian concerns over land mines may also benefit security interests. There is the realization in the Post-Cold War security environment that security has many facets, and as such the humanitarian option may well benefit the security requirements of some states. Countries with extensive land mine problems may remain unstable; the costs in international aid is becoming astronomical; and soldiers participating in peacekeeping missions are being increasingly exposed to this hazard. Thus, weapons controls based on the inhumane nature and effects of these weapons fits in time and place, and indeed in the self-interest of most states. Still, a more basic explanation may work in favour of a ban as "the humanitarian

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[28] "Land Mine Fiasco", *International Herald Tribune*, May 21, 1996, 8.

consequences of these small land mines that are now proliferating to such huge numbers override the issue of the legitimate uses of these weapons."[30] When the humanitarian consequences of land mine use are disproportionate to any perceived military gain, then the humanitarian argument should eventually prevail.

Does the willingness of the international community to place restrictions on particular weapons because of their humanitarian consequences reflect changes in the international security order, or are they unique occurrences? Is it also possible to say that these regimes of restraint reflect future trends in arms control? To a certain extent, the incredibly rapid developments of restraints on land mines and calls for their abolition are unique. Land mines have been an emotional issue that has touched the public conscience, and in doing so, has demanded a response. Chemical weapons were an emotive issue for the military but not especially so for the general public. Despite these different paths resulting in restrictions or prohibitions of these weapons, both these weapons evoked responses because of their nature and effects. Currently, in the Post-Cold War environment the international community does seem more willing to engage in an examination of the legality and humanity of particular weapons

To a certain degree, in the Post-Cold War world weapons have proliferated to such an extent that there is a pressing need for scrutinizing and re-assessing weapons policies. And all states need to be involved in this process if it is to be successful. First, as so few weapons have been restricted or abolished because of their nature

[29] Bruno Zimmermann, in UN Land Mine Forum, 125.

or effects, it may be difficult to establish that any trends are taking place *per se*; however, certain conclusions can be inferred. For example, there is a great deal of fear that if the Pentagon acquiesced on the matter of land mines, it would open up a virtual pandora's box of weapons controls.[31] As Joost Hiltermann argues:

> The main reason why the Pentagon is not interested in widening the scope of the 1980 Convention is that they see it as a dangerous precedent. As soon as we have a victory on land mines, we could start moving on to other weapons, such as anti-vehicle land mines and sub-munitions. [32]

But militaries may now be willing to adjust their support for arms control policies. How far a military is willing to go in terms of restrictions on other weapons may depend on "...whether a case can be made that these weapons are qualitatively different from other types of system legitimately used on the battlefield."[33] For example, the Pentagon initially rejected the idea of placing controls on the use of blinding laser weapons as anti-personnel weapons; it feared that commanders in the field could be held liable for any infractions concerning the use of these weapons and therefore hesitate in their duties. Yet, the Pentagon reversed this policy, and dropped its opposition to adding an extra protocol (Protocol IV) to the CCW dealing specifically with restrictions on the use of blinding lasers as an anti-personnel weapon. As the ICRC points out:

> Not only does this prohibit an abhorrent new means of warfare, but it also means that, for only the second time in history, the international community has been able to proscribe an inhumane weapon before having to witness its effects on the battlefield.[34]

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[30] Comments of Ambassador Karl Inderfurth, Special Political Affairs Officer at the U.S. Mission to the United Nations as reproduced in the UN Land Mine Forum, 117.
[31] Other weapons that may be cause for concern in the future are small-calibre bullets, cluster bombs, fuel-air explosives, and high-tech directed energy weapons (high power microwave weapons). For a description of these weapons and their effects see UN, "The Unfinished Disarmament Agenda", 32-35.
[32] Hiltermann in UN Land Mine Forum, 129.
[33] Joanna Spear, "On the Desirability and Feasibility of Arms Transfer Regime Formation", Contemporary Security Policy, Vol. 15, No. 3, December 1994, 104.
[34] ICRC, "General and Complete Disarmament", (October 1996), 3.

In the case of blinding laser weapons, member states have agreed that these weapons should be restricted even before they were widely fielded. This is in keeping with the obligations embodied under international humanitarian law requiring that military planners consider whether the development of new weapons would be prohibited under IHL or contrary to its general principles.[35]

In the Post-Cold War environment, the legality of using particular weapons based upon either their nature or their effects is receiving more serious attention than ever, which may bode well for arms control and disarmament efforts. More normatively, legalistic approaches are competing with the traditional realist approaches to the arms control process. This does not necessarily mean that realist approaches are obsolete, but that different approaches may be more useful or acceptable owing to the circumstances of the time.[36] Taking the general principles of the law of war as a measuring stick to determine if a weapon should be considered illegal is a very normative approach to arms control and disarmament.

For example, there seems to be more interest in the international community in debating the legality of particular weapons, as evidenced by the International Court of Justice (ICJ) taking up the issue of nuclear weapons. In an advisory opinion, the ICJ ruled that the use of nuclear weapons is generally unlawful but it

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[35] Ibid., 3.

[36] In the conduct of international affairs in the Post-Cold War era, the international community seems to be moving towards the resolution of problems through united action backed by legal mandates. This is evident in international peacekeeping and coalition operations and humanitarian interventions. (Recent examples include the coalition forces in the Gulf War to liberate Kuwait after Iraq's invasion, humanitarian intervention in Somalia, and peacekeeping mandates in Bosnia.)

could not agree on whether there should be exceptions: would these weapons be illegal if used in retaliation or for the survival of the state? The ICJ also ruled that the threat or the use of nuclear weapons violates international humanitarian law. Although the ICJ hedged on declaring the use of nuclear weapons illegal in all circumstances, and did not advocate an outright ban on these weapons, this non-binding advisory opinion can be viewed potentially as an first step towards the eventual elimination of nuclear weapons.[37] It may also be possible that other weapons could be subjected to international jurisprudence.

Can it also be concluded that arms control policy-making process is now more responsive to the needs of international society rather than to the interests of its strongest members? The strongest members will still have the most influence on the arms control process, but now other states and actors are taking a more active role in, and influencing, the process. Therefore, the interests of the international community as a whole are opened up for consideration, and with it the ethical and moral concerns facing the international society. When states seek to ban weapons because of their inhumanity they are contributing to the common good. Indeed, the process of arms control can be considered more responsive when it actually addresses the concerns and circumstances of international society.

Therefore, it is not surprising that these approaches have filtered down to the arms control field as well.

[37]While this may be an overly optimistic viewpoint, "...its potential influence to augment the international opinion that favors abolition of nuclear weapons cannot be overlooked. It will put the nuclear-club countries under increased moral pressure and responsibility to work harder on nuclear-disarmament issues." See "Netherlands: U.N. Court's Ruling on Nuclear Arms Can be Step Toward Eventual Ban", *Nikkei Weekly*, 15 July 1997.

With more actors involved in the arms control process, however, it may be more difficult to achieve cohesion in armaments policies, as there are so many different interests at stake. In other words, the international community may not necessarily work together towards a common good. Certain states habitually create obstacles to hinder the arms control or disarmament negotiating process. As voting is by consensus, the failure of the CCW review process has been blamed on particular "holdout states" that block any realistic hope for a ban.[38] The placing of land mines on the Conference on Disarmament agenda has also been criticized, as negotiations in that forum tend to be bogged down by the opposition of particular states. But, states now seem more willing to take the power away from hold-out states so that arms control accords can take shape. For example, the prospects for the Comprehensive Test Ban Treaty (CTBT) were jeopardized when India and Iran blocked the transmittal of the treaty to the UN General Assembly. In response Australia with 127 co-sponsors introduced a resolution that sent the treaty directly to the UN General Assembly for consideration,[39] thereby circumventing the loopholes in the treaty negotiation process that had allowed a minority of states to block legislation.

In the case of land mines, similar action is now occurring; Canada has proposed the establishment of a completely new treaty dedicated specifically to a total ban on land mines. By taking control of the process, Canada is avoiding the pitfalls of

[38] One of the recurring problems with the arms control negotiation process is that co-operation is usually best achieved between states with similar political and security concerns. It could also be argued that certain states may blame these holdout states for hindering the negotiation process, when in fact, they themselves do not want a particular issue to be passed.

[39] "The Signing of the Comprehensive Test Ban Treaty", Arms Control Today, September 1996, 8, and Craig Cerniello, "India Blocks Consensus on CTB, Treaty May Still Go the UN", Arms Control Today, August, 1996, 31.

the traditional arms control negotiation process. The advantage to this approach is that states which favoured a ban, but did not fight for one in the CCW review process because they did not think it would be a realistic negotiating position, would now be able to support a international ban on land mines. Critics would argue that states that would not support a ban in the CCW would shun any new regime. But as Senator Patrick Leahy argues:

> Like the Chemical Weapons Convention, which the administration rightly pushed even though some pariah governments have refused to join, the Canadian treaty will establish a global norm making these indiscriminate weapons unacceptable.[40]

If there is genuine support in the international community for a ban on particular weapons, then it is possible for the interests of the community as a whole to triumph over the narrow interests of the few.

A variety of approaches may be used to control weapons. Whether they include supplier regimes, moratoria, IHL treaties, or unilateral actions, they are important as arms control building blocks and should be seen as complementary to each other. They are also indicative of what the international community can achieve politically according to circumstances of the time. Abolishing weapons tends to be a complicated process; it cannot be achieved overnight. The path to a chemical weapons ban has been long but fairly straightforward. The aspiration for and drive towards a land mine ban has followed a more tortuous path—but a path that is evolving very rapidly. The current land mine campaign also benefits from lessons learned from the historical process of banning chemical weapons. As the ICRC argues:

> ...[E]xperience, which took almost a century to develop in the case of chemical weapons, has revealed the need to take probable new weapon developments

[40] Leahy letter to *The Washington Post*, (April 27, 1997), C6.

> seriously, to take preventative measures through the total prohibition in principle of weapons that are likely to be damaging, and to back these up with effective disarmament and arms control measures.[41]

From this study we can conclude that the process of restraining these weapons may have different orientations, and that different factors may influence and encourage the process in respect to each weapon. Ultimately, a fundamental criterion has to be evident if the weapon is to be banned. The weapon in question must be considered to have only marginal military utility. The weapon must not be deemed crucial to maintaining international security, and states that relinquish the weapon would not be at risk from other states that still possess these weapons. Once this basic criterion has been met, then the argument to ban the weapon on humanitarian grounds can prevail. The fact that land mines are an 'active' problem (the international humanitarian crisis caused by anti-personnel land mines) that cannot be ignored has actually forced military establishments to reassess their policies. The current international security environment is becoming increasingly responsive to both humanitarian and proliferation concerns. As a result, the restriction or removal of pernicious weapons is becoming a more realistic goal. In the case of land mines, it is likely that (in the future) they will go the way that chemical weapons have gone.

[41] ICRC, Background Document, April 1994, 6.

Appendix I-The Original Convention on Conventional Weapons (CCW)

CONVENTION ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF CERTAIN CONVENTIONAL WEAPONS WHICH MAY BE DEEMED TO BE EXCESSIVELY INJURIOUS OR TO HAVE INDISCRIMINATE EFFECTS

The High Contracting Parties,

Recalling that every State has the duty, in conformity with the Charter of the United Nations, to refrain in its international relations from the threat or use of force against the sovereignty, territorial integrity or political independence of any State, or in any other manner inconsistent with the purposes of the United Nations,

Further recalling the general principle of the protection of the civilian population against the effects of hostilities,

Basing themselves on the principle of international law that the right of the parties to an armed conflict to choose methods or means of warfare is not unlimited, and on the principle that prohibits the employment in armed conflicts of weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering,

Also recalling that it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment,

Confirming their determination that in cases not covered by this Convention and its annexed Protocols or by other international agreements, the civilian population and the combatants shall at all times remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience,

Desiring to contribute to international détente, the ending of the arms race and the building of confidence among States, and hence to the realization of the aspiration of all peoples to live in peace,

Recognizing the importance of pursuing every effort which may contribute to progress towards general and complete disarmament under strict and effective international control,

Reaffirming the need to continue the codification and progressive development of the rules of international law applicable in armed conflict,

Wishing to prohibit or restrict further the use of certain conventional weapons and believing that the positive results achieved in this area may facilitate the main talks on disarmament with a view to putting an end to the production, stockpiling and proliferation of such weapons,

Emphasizing the desirability that all States become parties to this Convention and its annexed Protocols, especially the militarily significant States,

Bearing in mind that the General Assembly of the United Nations and the United Nations Disarmament Commission may decide to examine the question of a possible broadening of the scope of the prohibitions and restrictions contained in this Convention and its annexed Protocols,

Further bearing in mind that the Committee on Disarmament may decide to consider the question of adopting further measures to prohibit or restrict the use of certain conventional weapons,

Have agreed as follows:

Article 1

Scope of application

This Convention and its annexed Protocols shall apply in the situations referred to in Article 2 common to the Geneva Conventions of 12 August 1949 for the Protection of War Victims, including any situation described in paragraph 4 of Article 1 of Additional Protocol I to these Conventions.

Article 2

Relations with other international agreements

Nothing in this Convention or its annexed Protocols shall be interpreted as detracting from other obligations imposed upon the High Contracting Parties by international humanitarian law applicable in armed conflict.

Article 3

Signature

This Convention shall be open for signature by all States at United Nations Headquarters in New York for a period of twelve months from 10 April 1981.

Article 4

Ratification, acceptance, approval or accession

1. This Convention is subject to ratification, acceptance or approval by the Signatories. Any State which has not signed this Convention may accede to it.

2. The instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.

3. Expressions of consent to be bound by any of the Protocols annexed to this Convention shall be optional for each State, provided that at the time of the deposit of its instrument of ratification, acceptance or approval of this Convention or of accession thereto, that State shall notify the Depositary of its consent to be bound by any two or more of these Protocols.

4. At any time after the deposit of its instrument of ratification, acceptance or approval of this Convention or of accession thereto, a State may notify the Depositary of its consent to be bound by any annexed Protocol by which it is not already bound.

5. Any Protocol by which a High Contracting Party is bound shall for that Party form an integral part of this Convention.

Article 5

Entry into force

1. This Convention shall enter into force six months after the date of deposit of the twentieth instrument of ratification, acceptance, approval or accession.

2. For any State which deposits its instrument of ratification, acceptance, approval or accession after the date of the deposit of the twentieth instrument of ratification, acceptance, approval or accession, this Convention shall enter into force six months after the date on which that State has deposited its instrument of ratification, acceptance, approval or accession.

3. Each of the Protocols annexed to this Convention shall enter into force six months after the date by which twenty States have notified their consent to be bound by it in accordance with paragraph 3 or 4 of Article 4 of this Convention.

4. For any State which notifies its consent to be bound by a Protocol annexed to this Convention after the date by which twenty States have notified their consent to be bound by it, the Protocol shall enter into force six months after the date on which that State has notified its consent so to be bound.

Article 6

Dissemination

The High Contracting Parties undertake, in time of peace as in time of armed conflict, to disseminate this Convention and those of its annexed Protocols by which they are bound as widely as possible in their respective countries and, in particular, to include the study thereof in their programmes of military instruction, so that those instruments may become known to their armed forces.

Article 7

Treaty relations upon entry into force of this Convention

1. When one of the parties to a conflict is not bound by an annexed Protocol, the parties bound by this Convention and that annexed Protocol shall remain bound by them in their mutual relations.

2. Any High Contracting Party shall be bound by this Convention and any Protocol annexed thereto which is in force for it, in any situation contemplated by Article 1, in relation to any State which is not a party to this Convention or bound by the relevant annexed Protocol, if the latter accepts and applies this Convention or the relevant Protocol, and so notifies the Depositary.

3. The Depositary shall immediately inform the High Contracting Parties concerned of any notification received under paragraph 2 of this Article.

4. This Convention, and the annexed Protocols by which a High Contracting Party is bound, shall apply with respect to an armed conflict against that High Contracting Party of the type referred to in Article 1, paragraph 4, of Additional Protocol I to the Geneva Conventions of 12 August 1949 for the Protection of War Victims:

(a) where the High Contracting Party is also a party to Additional Protocol I and an authority referred to in Article 96, paragraph 3, of that Protocol has undertaken to apply the Geneva Conventions and Additional Protocol I in accordance with Article 96, paragraph 3, of the said Protocol, and undertakes to apply this Convention and the relevant annexed Protocols in relation to that conflict; or

(b) where the High Contracting Party is not a party to Additional Protocol I and an authority of the type referred to in subparagraph (a) above accepts and applies the obligations of the Geneva Conventions and of this Convention and the relevant annexed Protocols in relation to that conflict. Such an acceptance and application shall have in relation to that conflict the following effects:

(i) the Geneva Conventions and this Convention and its relevant annexed Protocols are brought into force for the parties to the conflict with immediate effect;

(ii) the said authority assumes the same rights and obligations as those which have been assumed by a High Contracting Party to the Geneva Conventions, this Convention and its relevant annexed Protocols; and

(iii) the Geneva Conventions, this Convention and its relevant annexed Protocols are equally binding upon all parties to the conflict.

The High Contracting Party and the authority may also agree to accept and apply the obligations of Additional Protocol I to the Geneva Conventions on a reciprocal basis.

Article 8

Review and amendments

1.(a) At any time after the entry into force of this Convention any High Contracting Party may propose amendments to this Convention or any annexed Protocol

by which it is bound. Any proposal for an amendment shall be communicated to the Depositary, who shall notify it to all the High Contracting Parties and shall seek their views on whether a conference should be convened to consider the proposal. If a majority, that shall not be less than eighteen of the High Contracting Parties so agree, he shall promptly convene a conference to which all High Contracting Parties shall be invited. States not parties to this Convention shall be invited to the conference as observers.

(b) Such a conference may agree upon amendments which shall be adopted and shall enter into force in the same manner as this Convention and the annexed Protocols, provided that amendments to this Convention may be adopted only by the High Contracting Parties and that amendments to a specific annexed Protocol may be adopted only by the High Contracting Parties which are bound by that Protocol.

2.(a) At any time after the entry into force of this Convention any High Contracting Party may propose additional protocols relating to other categories of conventional weapons not covered by the existing annexed protocols. Any such proposal for an additional protocol shall be communicated to the Depositary, who shall notify it to all the High Contracting Parties in accordance with subparagraph 1(a) of this Article. If a majority, that shall not be less than eighteen of the High Contracting Parties so agree, the Depositary shall promptly convene a conference to which all States shall be invited.

(b) Such a conference may agree, with the full participation of all States represented at the conference, upon additional protocols which shall be adopted in the same manner as this Convention, shall be annexed thereto and shall enter into force as provided in paragraphs 3 and 4 of Article 5 of this Convention.

3.(a) If, after a period of ten years following the entry into force of this Convention, no conference has been convened in accordance with subparagraph 1(a) or 2(a) of this Article, any High Contracting Party may request the Depositary to convene a conference to which all High Contracting Parties shall be invited to review the scope and operation of this Convention and the Protocols annexed thereto and to consider any proposal for amendments of this Convention or of the existing Protocols. States not parties to this Convention shall be invited as observers to the conference. The conference may agree upon amendments which shall be adopted and enter into force in accordance with subparagraph 1(b) above.

(b) At such conference consideration may also be given to any proposal for additional protocols relating to other categories of conventional weapons not

covered by the existing annexed Protocols. All States represented at the conference may participate fully in such consideration. Any additional protocols shall be adopted in the same manner as this Convention, shall be annexed thereto and shall enter into force as provided in paragraphs 3 and 4 of Article 5 of this Convention.

(c) Such a conference may consider whether provision should be made for the convening of a further conference at the request of any High Contracting Party if, after a similar period to that referred to in subparagraph 3(a) of this Article, no conference has been convened in accordance with subparagraph 1(a) or 2(a) of this Article.

Article 9

Denunciation

1. Any High Contracting Party may denounce this Convention or any of its annexed Protocols by so notifying the Depositary.

2. Any such denunciation shall only take effect one year after receipt by the Depositary of the notification of denunciation. If, however, on the expiry of that year the denouncing High Contracting Party is engaged in one of the situations referred to in Article 1, the Party shall continue to be bound by the obligations of this Convention and of the relevant annexed Protocols until the end of the armed conflict or occupation and, in any case, until the termination of operations connected with the final release, repatriation or re-establishment of the persons protected by the rules of international law applicable in armed conflict, and in the case of any annexed Protocol containing provisions concerning situations in which peace-keeping, observation or similar functions are performed by United Nations forces or missions in the area concerned, until the termination of those functions.

3. Any denunciation of this Convention shall be considered as also applying to all annexed Protocols by which the denouncing High Contracting Party is bound.

4. Any denunciation shall have effect only in respect of the denouncing High Contracting Party.

5. Any denunciation shall not affect the obligations already incurred, by reason of an armed conflict, under this Convention and its annexed Protocols by such denouncing High Contracting Party in respect of any act committed before this denunciation becomes effective.

Article 10

Depositary

1. The Secretary-General of the United Nations shall be the Depositary of this Convention and of its annexed Protocols.

2. In addition to his usual functions, the Depositary shall inform all States of:

(a) signatures affixed to this Convention under Article 3;

(b) deposits of instruments of ratification, acceptance or approval of or accession to this Convention deposited under Article 4;

(c) notifications of consent to be bound by annexed Protocols under Article 4;

(d) the dates of entry into force of this Convention and of each of its annexed Protocols under Article 5; and

(e) notifications of denunciation received under Article 9 and their effective date.

Article 11

Authentic texts

The original of this Convention with the annexed Protocols, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Depositary, who shall transmit certified true copies thereof to all States.

PROTOCOL ON NON-DETECTABLE FRAGMENTS

(PROTOCOL I)

It is prohibited to use any weapon the primary effect of which is to injure by fragments which in the human body escape detection by X-rays.

PROTOCOL ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF MINES, BOOBY-TRAPS AND OTHER DEVICES

(PROTOCOL II)

Article 1

Material scope of application

This Protocol relates to the use on land of the mines, booby-traps and other devices defined herein, including mines laid to interdict beaches, waterway crossings or river crossings, but does not apply to the use of anti-ship mines at sea or in inland waterways.

Article 2

Definitions

For the purpose of this Protocol:

1. "Mine" means any munition placed under, on or near the ground or other surface area and designed to be detonated or exploded by the presence, proximity or contact of a person or vehicle, and "remotely delivered mine" means any mine so defined delivered by artillery, rocket, mortar or similar means or dropped from an aircraft.

2. "Booby-trap" means any device or material which is designed, constructed or adapted to kill or injure and which functions unexpectedly when a person disturbs or approaches an apparently harmless object or performs an apparently safe act.

3. "Other devices" means manually-emplaced munitions and devices designed to kill, injure or damage and which are actuated by remote control or automatically after a lapse of time.

4. "Military objective" means, so far as objects are concerned, any object which by its nature, location, purpose or use makes an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

5. "Civilian objects" are all objects which are not military objectives as defined in paragraph 4.

6. "Recording" means a physical, administrative and technical operation designed to obtain, for the purpose of registration in the official records, all available information facilitating the location of minefields, mines and booby-traps.

Article 3

General restrictions on the use of mines, booby-traps and other devices

1. This Article applies to:

(a) mines;

(b) booby-traps; and

(c) other devices.

2. It is prohibited in all circumstances to direct weapons to which this Article applies, either in offence, defence or by way of reprisals, against the civilian population as such or against individual civilians.

3. The indiscriminate use of weapons to which this Article applies is prohibited. Indiscriminate use is any placement of such weapons:

(a) which is not on, or directed against, a military objective; or

(b) which employs a method or means of delivery which cannot be directed at a specific military objective; or

(c) which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.

4. All feasible precautions shall be taken to protect civilians from the effects of weapons to which this Article applies. Feasible precautions are those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations.

Article 4

Restrictions on the use of mines other than remotely delivered mines, booby-traps and other devices in populated areas

1. This Article applies to:

(a) mines other than remotely delivered mines;

(b) booby-traps; and

(c) other devices.

2. It is prohibited to use weapons to which this Article applies in any city, town, village or other area containing a similar concentration of civilians in which combat between ground forces is not taking place or does not appear to be imminent, unless either:

(a) they are placed on or in the close vicinity of a military objective belonging to or under the control of an adverse party; or

(b) measures are taken to protect civilians from their effects, for example, the posting of warning signs, the posting of sentries, the issue of warnings or the provision of fences.

Article 5

Restrictions on the use of remotely delivered mines

1. The use of remotely delivered mines is prohibited unless such mines are only used within an area which is itself a military objective or which contains military objectives, and unless:

(a) their location can be accurately recorded in accordance with Article 7(1)(a); or

(b) an effective neutralizing mechanism is used on each such mine, that is to say, a self-actuating mechanism which is designed to render a mine harmless or cause it to destroy itself when it is anticipated that the mine will no longer serve the military purpose for which it was placed in position, or a remotely-controlled mechanism which is designed to render harmless or destroy a mine when the mine no longer serves the military purpose for which it was placed in position.

2. Effective advance warning shall be given of any delivery or dropping of remotely delivered mines which may affect the civilian population, unless circumstances do not permit.

Article 6

Prohibition on the use of certain booby-traps

1. Without prejudice to the rules of international law applicable in armed conflict relating to treachery and perfidy, it is prohibited in all circumstances to use:

(a) any booby-trap in the form of an apparently harmless portable object which is specifically designed and constructed to contain explosive material and to detonate when it is disturbed or approached, or

(b) booby-traps which are in any way attached to or associated with:

(i) internationally recognized protective emblems, signs or signals;

(ii) sick, wounded or dead persons;

(iii) burial or cremation sites or graves;

(iv) medical facilities, medical equipment, medical supplies or medical transportation;

(v) children's toys or other portable objects or products specially designed for the feeding, health, hygiene, clothing or education of children;

(vi) food or drink;

(vii) kitchen utensils or appliances except in military establishments, military locations or military supply depots;

(viii) objects clearly of a religious nature;

(ix) historic monuments, works of art or places of worship which constitute the cultural or spiritual heritage of peoples;

(x) animals or their carcasses.

2. It is prohibited in all circumstances to use any booby-trap which is designed to cause superfluous injury or unnecessary suffering.

Article 7

Recording and publication of the location of minefields, mines and booby-traps

1. The parties to a conflict shall record the location of:

(a) all pre-planned minefields laid by them; and

(b) all areas in which they have made large-scale and pre-planned use of booby-traps.

2. The parties shall endeavour to ensure the recording of the location of all other minefields, mines and booby-traps which they have laid or placed in position.

3. All such records shall be retained by the parties who shall:

(a) immediately after the cessation of active hostilities:

(i) take all necessary and appropriate measures, including the use of such records, to protect civilians from the effects of minefields, mines and booby-traps; and either

(ii) in cases where the forces of neither party are in the territory of the adverse party, make available to each other and to the Secretary-General of the United Nations all information in their possession concerning the location of minefields, mines and booby-traps in the territory of the adverse party; or

(iii) once complete withdrawal of the forces of the parties from the territory of the adverse party has taken place, make available to the adverse party and to the Secretary-General of the United Nations all information in their possession concerning the location of minefields, mines and booby-traps in the territory of the adverse party;

(b) when a United Nations force or mission performs functions in any area, make available to the authority mentioned in Article 8 such information as is required by that Article;

(c) whenever possible, by mutual agreement, provide for the release of information concerning the location of minefields, mines and booby-traps, particularly in agreements governing the cessation of hostilities.

Article 8

Protection of United Nations forces and missions from the effects of minefields, mines and booby-traps

1. When a United Nations force or mission performs functions of peace-keeping, observation or similar functions in any area, each party to the conflict shall, if requested by the head of the United Nations force or mission in that area, as far as it is able:

(a) remove or render harmless all mines or booby-traps in that area;

(b) take such measures as may be necessary to protect the force or mission from the effects of minefields, mines and booby-traps while carrying out its duties; and

(c) make available to the head of the United Nations force or mission in that area, all information in the party's possession concerning the location of minefields, mines and booby-traps in that area.

2. When a United Nations fact-finding mission performs functions in any area, any party to the conflict concerned shall provide protection to that mission except where, because of the size of such mission, it cannot adequately provide such protection. In that case it shall make available to the head of the mission the information in its possession concerning the location of minefields, mines and booby-traps in that area.

Article 9

International co-operation in the removal of minefields, mines and booby-traps

After the cessation of active hostilities, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of information and technical and material assistance - including, in appropriate circumstances, joint operations - necessary to remove or otherwise render ineffective minefields, mines and booby-traps placed in position during the conflict.

Technical Annex to the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices (Protocol II)

Guidelines on Recording

Whenever an obligation for the recording of the location of minefields, mines and booby-traps arises under the Protocol, the following guidelines shall be taken into account.

1. With regard to pre-planned minefields and large-scale and pre-planned use of booby-traps:

(a) maps, diagrams or other records should be made in such a way as to indicate the extent of the minefield or booby-trapped area; and

(b) the location of the minefield or booby-trapped area should be specified by relation to the co-ordinates of a single reference point and by the estimated dimensions of the area containing mines and booby-traps in relation to that single reference point.

2. With regard to other minefields, mines and booby-traps laid or placed in position:

In so far as possible, the relevant information specified in paragraph 1 above should be recorded so as to enable the areas containing minefields, mines and booby-traps to be identified.

PROTOCOL ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF INCENDIARY WEAPONS

(PROTOCOL III)

Article 1

Definitions

For the purpose of this Protocol:

1. "Incendiary weapon" means any weapon or munition which is primarily designed to set fire to objects or to cause burn injury to persons through the action of flame, heat, or a combination thereof, produced by a chemical reaction of a substance delivered on the target.

(a) Incendiary weapons can take the form of, for example, flame throwers, fougasses, shells, rockets, grenades, mines, bombs and other containers of incendiary substances.

(b) Incendiary weapons do not include:

(i) Munitions which may have incidental incendiary effects, such as illuminants, tracers, smoke or signalling systems;

(ii) Munitions designed to combine penetration, blast or fragmentation effects with an additional incendiary effect, such as armour-piercing projectiles, fragmentation shells, explosive bombs and similar combined-effects munitions in which the incendiary effect is not specifically designed to cause burn injury to persons, but to be used against military objectives, such as armoured vehicles, aircraft and installations or facilities.

2. "Concentration of civilians" means any concentration of civilians, be it permanent or temporary, such as in inhabited parts of cities, or inhabited towns or villages, or as in camps or columns of refugees or evacuees, or groups of nomads.

3. "Military objective" means, so far as objects are concerned, any object which by its nature, location, purpose or use makes an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

4. "Civilian objects" are all objects which are not military objectives as defined in paragraph 3.

5. "Feasible precautions" are those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations.

Article 2

Protection of civilians and civilian objects

1. It is prohibited in all circumstances to make the civilian population as such, individual civilians or civilian objects the object of attack by incendiary weapons.

2. It is prohibited in all circumstances to make any military objective located within a concentration of civilians the object of attack by air-delivered incendiary weapons.

3. It is further prohibited to make any military objective located within a concentration of civilians the object of attack by means of incendiary weapons other than air-delivered incendiary weapons, except when such military objective is clearly separated from the concentration of civilians and all feasible precautions are taken with a view to limiting the incendiary effects to the military objective and to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects.

4. It is prohibited to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives.

REVIEW CONFERENCE OF THE STATES PARTIES TO THE CONVENTION ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF CERTAIN CONVENTIONAL WEAPONS WHICH MAY BE DEEMED TO BE EXCESSIVELY INJURIOUS OR TO HAVE INDISCRIMINATE EFFECTS

CCW/CONF.I/14
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PROTOCOL ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF MINES, BOOBY-TRAPS AND OTHER DEVICES AS AMENDED ON 3 MAY 1996 (PROTOCOL II AS AMENDED ON 3 MAY 1996) ANNEXED TO THE CONVENTION ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF CERTAIN CONVENTIONAL WEAPONS WHICH MAY BE DEEMED TO BE EXCESSIVELY INJURIOUS OR TO HAVE INDISCRIMINATE EFFECTS

ARTICLE 1: AMENDED PROTOCOL

The Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Protocol II), annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects ("the Convention") is hereby amended. The text of the Protocol as amended shall read as follows:

"Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as Amended on 3 May 1996 (Protocol II as amended on 3 May 1996)

Article 1

Scope of application

1. This Protocol relates to the use on land of the mines, booby-traps and other devices, defined herein, including mines laid to interdict beaches, waterway crossings or river crossings, but does not apply to the use of anti-ship mines at sea or in inland waterways.

2. This Protocol shall apply, in addition to situations referred to in Article 1 of this Convention, to situations referred to in Article 3 common to the Geneva Conventions of 12 August 1949. This Protocol shall not apply to situations of internal disturbances and tensions, such as riots, isolated and sporadic acts of violence and other acts of a similar nature, as not being armed conflicts.

ENCLOSURE 1

3. In case of armed conflicts not of an international character occurring in the territory of one of the High Contracting Parties, each party to the conflict shall be bound to apply the prohibitions and restrictions of this Protocol.

4. Nothing in this Protocol shall be invoked for the purpose of affecting the sovereignty of a State or the responsibility of the Government, by all legitimate means, to maintain or re-establish law and order in the State or to defend the national unity and territorial integrity of the State.

5. Nothing in this Protocol shall be invoked as a justification for intervening, directly or indirectly, for any reason whatever, in the armed conflict or in the internal or external affairs of the High Contracting Party in the territory of which that conflict occurs.

6. The application of the provisions of this Protocol to parties to a conflict, which are not High Contracting Parties that have accepted this Protocol, shall not change their legal status or the legal status of a disputed territory, either explicitly or implicitly.

Article 2

Definitions

For the purpose of this Protocol:

1. "Mine" means a munition placed under, on or near the ground or other surface area and designed to be exploded by the presence, proximity or contact of a person or vehicle.

2. "Remotely-delivered mine" means a mine not directly emplaced but delivered by artillery, missile, rocket, mortar, or similar means, or dropped from an aircraft. Mines delivered from a land-based system from less than 500 metres are not considered to be "remotely delivered", provided that they are used in accordance with Article 5 and other relevant Articles of this Protocol.

3. "Anti-personnel mine" means a mine primarily designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons.

4. "Booby-trap" means any device or material which is designed, constructed, or adapted to kill or injure, and which functions unexpectedly when a person disturbs or approaches an apparently harmless object or performs an apparently safe act.

5. "Other devices" means manually-emplaced munitions and devices including improvised explosive devices designed to kill, injure or damage and which are actuated manually, by remote control or automatically after a lapse of time.

6. "Military objective" means, so far as objects are concerned, any object which by its nature, location, purpose or use makes an effective contribution to military action and whose

total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

7. "Civilian objects" are all objects which are not military objectives as defined in paragraph 6 of this Article.

8. "Minefield" is a defined area in which mines have been emplaced and "mined area" is an area which is dangerous due to the presence of mines. "Phoney minefield" means an area free of mines that simulates a minefield. The term "minefield" includes phoney minefields.

9. "Recording" means a physical, administrative and technical operation designed to obtain, for the purpose of registration in official records, all available information facilitating the location of minefields, mined areas, mines, booby-traps and other devices.

10. "Self-destruction mechanism" means an incorporated or externally attached automatically-functioning mechanism which secures the destruction of the munition into which it is incorporated or to which it is attached.

11. "Self-neutralization mechanism" means an incorporated automatically-functioning mechanism which renders inoperable the munition into which it is incorporated.

12. "Self-deactivating" means automatically rendering a munition inoperable by means of the irreversible exhaustion of a component, for example, a battery, that is essential to the operation of the munition.

13. "Remote control" means control by commands from a distance.

14. "Anti-handling device" means a device intended to protect a mine and which is part of, linked to, attached to or placed under the mine and which activates when an attempt is made to tamper with the mine.

15. "Transfer" involves, in addition to the physical movement of mines into or from national territory, the transfer of title to and control over the mines, but does not involve the transfer of territory containing emplaced mines.

Article 3

General restrictions on the use of mines, booby-traps and other devices

1. This Article applies to:

(a) mines;
(b) booby-traps; and
(c) other devices.

2. Each High Contracting Party or party to a conflict is, in accordance with the provisions of this Protocol, responsible for all mines, booby-traps, and other devices employed by it and undertakes to clear, remove, destroy or maintain them as specified in Article 10 of this Protocol.

3. It is prohibited in all circumstances to use any mine, booby-trap or other device which is designed or of a nature to cause superfluous injury or unnecessary suffering.

4. Weapons to which this Article applies shall strictly comply with the standards and limitations specified in the Technical Annex with respect to each particular category.

5. It is prohibited to use mines, booby-traps or other devices which employ a mechanism or device specifically designed to detonate the munition by the presence of commonly available mine detectors as a result of their magnetic or other non-contact influence during normal use in detection operations.

6. It is prohibited to use a self-deactivating mine equipped with an anti-handling device that is designed in such a manner that the anti-handling device is capable of functioning after the mine has ceased to be capable of functioning.

7. It is prohibited in all circumstances to direct weapons to which this Article applies, either in offence, defence or by way of reprisals, against the civilian population as such or against individual civilians or civilian objects.

8. The indiscriminate use of weapons to which this Article applies is prohibited. Indiscriminate use is any placement of such weapons:

(a) which is not on, or directed against, a military objective. In case of doubt as to whether an object which is normally dedicated to civilian purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used; or

(b) which employs a method or means of delivery which cannot be directed at a specific military objective; or

(c) which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.

9. Several clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects are not to be treated as a single military objective.

10. All feasible precautions shall be taken to protect civilians from the effects of weapons to which this Article applies. Feasible precautions are those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations. These circumstances include, but are not limited to:

(a) the short- and long-term effect of mines upon the local civilian population for the duration of the minefield;

(b) possible measures to protect civilians (for example, fencing, signs, warning and monitoring);

(c) the availability and feasibility of using alternatives; and

(d) the short- and long-term military requirements for a minefield.

11. Effective advance warning shall be given of any emplacement of mines, booby-traps and other devices which may affect the civilian population, unless circumstances do not permit.

Article 4

Restrictions on the use of anti-personnel mines

It is prohibited to use anti-personnel mines which are not detectable, as specified in paragraph 2 of the Technical Annex.

Article 5

Restrictions on the use of anti-personnel mines other than remotely-delivered mines

1. This Article applies to anti-personnel mines other than remotely-delivered mines.

2. It is prohibited to use weapons to which this Article applies which are not in compliance with the provisions on self-destruction and self-deactivation in the Technical Annex, unless:

(a) such weapons are placed within a perimeter-marked area which is monitored by military personnel and protected by fencing or other means, to ensure the effective exclusion of civilians from the area. The marking must be of a distinct and durable character and must at least be visible to a person who is about to enter the perimeter-marked area; and

(b) such weapons are cleared before the area is abandoned, unless the area is turned over to the forces of another State which accept responsibility for the maintenance of the protections required by this Article and the subsequent clearance of those weapons.

3. A party to a conflict is relieved from further compliance with the provisions of sub-paragraphs 2 (a) and 2 (b) of this Article only if such compliance is not feasible due to forcible loss of control of the area as a result of enemy military action, including situations where direct enemy military action makes it impossible to comply. If that party regains

control of the area, it shall resume compliance with the provisions of sub-paragraphs 2 (a) and 2 (b) of this Article.

4. If the forces of a party to a conflict gain control of an area in which weapons to which this Article applies have been laid, such forces shall, to the maximum extent feasible, maintain and, if necessary, establish the protections required by this Article until such weapons have been cleared.

5. All feasible measures shall be taken to prevent the unauthorized removal, defacement, destruction or concealment of any device, system or material used to establish the perimeter of a perimeter-marked area.

6. Weapons to which this Article applies which propel fragments in a horizontal arc of less than 90 degrees and which are placed on or above the ground may be used without the measures provided for in sub-paragraph 2 (a) of this Article for a maximum period of 72 hours, if:

(a) they are located in immediate proximity to the military unit that emplaced them; and

(b) the area is monitored by military personnel to ensure the effective exclusion of civilians.

Article 6

Restrictions on the use of remotely-delivered mines

1. It is prohibited to use remotely-delivered mines unless they are recorded in accordance with sub-paragraph 1 (b) of the Technical Annex.

2. It is prohibited to use remotely-delivered anti-personnel mines which are not in compliance with the provisions on self-destruction and self-deactivation in the Technical Annex.

3. It is prohibited to use remotely-delivered mines other than anti-personnel mines, unless, to the extent feasible, they are equipped with an effective self-destruction or self-neutralization mechanism and have a back-up self-deactivation feature, which is designed so that the mine will no longer function as a mine when the mine no longer serves the military purpose for which it was placed in position.

4. Effective advance warning shall be given of any delivery or dropping of remotely-delivered mines which may affect the civilian population, unless circumstances do not permit.

Article 7

Prohibitions on the use of booby-traps and other devices

1. Without prejudice to the rules of international law applicable in armed conflict relating to treachery and perfidy, it is prohibited in all circumstances to use booby-traps and other devices which are in any way attached to or associated with:

(a) internationally recognized protective emblems, signs or signals;

(b) sick, wounded or dead persons;

(c) burial or cremation sites or graves;

(d) medical facilities, medical equipment, medical supplies or medical transportation;

(e) children's toys or other portable objects or products specially designed for the feeding, health, hygiene, clothing or education of children;

(f) food or drink;

(g) kitchen utensils or appliances except in military establishments, military locations or military supply depots;

(h) objects clearly of a religious nature;

(i) historic monuments, works of art or places of worship which constitute the cultural or spiritual heritage of peoples; or

(j) animals or their carcasses.

2. It is prohibited to use booby-traps or other devices in the form of apparently harmless portable objects which are specifically designed and constructed to contain explosive material.

3. Without prejudice to the provisions of Article 3, it is prohibited to use weapons to which this Article applies in any city, town, village or other area containing a similar concentration of civilians in which combat between ground forces is not taking place or does not appear to be imminent, unless either:

(a) they are placed on or in the close vicinity of a military objective; or

(b) measures are taken to protect civilians from their effects, for example, the posting of warning sentries, the issuing of warnings or the provision of fences.

Article 8

Transfers

1. In order to promote the purposes of this Protocol, each High Contracting Party:

(a) undertakes not to transfer any mine the use of which is prohibited by this Protocol;

(b) undertakes not to transfer any mine to any recipient other than a State or a State agency authorized to receive such transfers;

(c) undertakes to exercise restraint in the transfer of any mine the use of which is restricted by this Protocol. In particular, each High Contracting Party undertakes not to transfer any anti-personnel mines to States which are not bound by this Protocol, unless the recipient State agrees to apply this Protocol; and

(d) undertakes to ensure that any transfer in accordance with this Article takes place in full compliance, by both the transferring and the recipient State, with the relevant provisions of this Protocol and the applicable norms of international humanitarian law.

2. In the event that a High Contracting Party declares that it will defer compliance with specific provisions on the use of certain mines, as provided for in the Technical Annex, sub-paragraph 1 (a) of this Article shall however apply to such mines.

3. All High Contracting Parties, pending the entry into force of this Protocol, will refrain from any actions which would be inconsistent with sub-paragraph 1 (a) of this Article.

Article 9

Recording and use of information on minefields, mined areas, mines, booby-traps and other devices

1. All information concerning minefields, mined areas, mines, booby-traps and other devices shall be recorded in accordance with the provisions of the Technical Annex.

2. All such records shall be retained by the parties to a conflict, who shall, without delay after the cessation of active hostilities, take all necessary and appropriate measures, including the use of such information, to protect civilians from the effects of minefields, mined areas, mines, booby-traps and other devices in areas under their control.

At the same time, they shall also make available to the other party or parties to the conflict and to the Secretary-General of the United Nations all such information in their possession concerning minefields, mined areas, mines, booby-traps and other devices laid by them in areas no longer under their control; provided, however, subject to reciprocity, where the forces of a party to a conflict are in the territory of an adverse party, either party may withhold such information from the Secretary-General and the other party, to the extent that

security interests require such withholding, until neither party is in the territory of the other. In the latter case, the information withheld shall be disclosed as soon as those security interests permit. Wherever possible, the parties to the conflict shall seek, by mutual agreement, to provide for the release of such information at the earliest possible time in a manner consistent with the security interests of each party.

3. This Article is without prejudice to the provisions of Articles 10 and 12 of this Protocol.

Article 10

Removal of minefields, mined areas, mines, booby-traps and other devices and international cooperation

1. Without delay after the cessation of active hostilities, all minefields, mined areas, mines, booby-traps and other devices shall be cleared, removed, destroyed or maintained in accordance with Article 3 and paragraph 2 of Article 5 of this Protocol.

2. High Contracting Parties and parties to a conflict bear such responsibility with respect to minefields, mined areas, mines, booby-traps and other devices in areas under their control.

3. With respect to minefields, mined areas, mines, booby-traps and other devices laid by a party in areas over which it no longer exercises control, such party shall provide to the party in control of the area pursuant to paragraph 2 of this Article, to the extent permitted by such party, technical and material assistance necessary to fulfil such responsibility.

4. At all times necessary, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of technical and material assistance, including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil such responsibilities.

Article 11

Technological cooperation and assistance

1. Each High Contracting Party undertakes to facilitate and shall have the right to participate in the fullest possible exchange of equipment, material and scientific and technological information concerning the implementation of this Protocol and means of mine clearance. In particular, High Contracting Parties shall not impose undue restrictions on the provision of mine clearance equipment and related technological information for humanitarian purposes.

2. Each High Contracting Party undertakes to provide information to the database on mine clearance established within the United Nations System, especially information concerning various means and technologies of mine clearance, and lists of experts, expert agencies or national points of contact on mine clearance.

3. Each High Contracting Party in a position to do so shall provide assistance for mine clearance through the United Nations System, other international bodies or on a bilateral basis, or contribute to the United Nations Voluntary Trust Fund for Assistance in Mine Clearance.

4. Requests by High Contracting Parties for assistance, substantiated by relevant information, may be submitted to the United Nations, to other appropriate bodies or to other States. These requests may be submitted to the Secretary-General of the United Nations, who shall transmit them to all High Contracting Parties and to relevant international organizations.

5. In the case of requests to the United Nations, the Secretary-General of the United Nations, within the resources available to the Secretary-General of the United Nations, may take appropriate steps to assess the situation and, in cooperation with the requesting High Contracting Party, determine the appropriate provision of assistance in mine clearance or implementation of the Protocol. The Secretary-General may also report to High Contracting Parties on any such assessment as well as on the type and scope of assistance required.

6. Without prejudice to their constitutional and other legal provisions, the High Contracting Parties undertake to cooperate and transfer technology to facilitate the implementation of the relevant prohibitions and restrictions set out in this Protocol.

7. Each High Contracting Party has the right to seek and receive technical assistance, where appropriate, from another High Contracting Party on specific relevant technology, other than weapons technology, as necessary and feasible, with a view to reducing any period of deferral for which provision is made in the Technical Annex.

Article 12

Protection from the effects of minefields, mined areas, mines, booby-traps and other devices

1. Application

(a) With the exception of the forces and missions referred to in sub-paragraph 2(a)(i) of this Article, this Article applies only to missions which are performing functions in an area with the consent of the High Contracting Party on whose territory the functions are performed.

(b) The application of the provisions of this Article to parties to a conflict which are not High Contracting Parties shall not change their legal status or the legal status of a disputed territory, either explicitly or implicitly.

(c) The provisions of this Article are without prejudice to existing international humanitarian law, or other international instruments as applicable, or decisions by the Security Council of the United Nations, which provide for a higher level of protection to personnel functioning in accordance with this Article.

2. Peace-keeping and certain other forces and missions

(a) This paragraph applies to:

(i) any United Nations force or mission performing peace-keeping, observation or similar functions in any area in accordance with the Charter of the United Nations;

(ii) any mission established pursuant to Chapter VIII of the Charter of the United Nations and performing its functions in the area of a conflict.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a force or mission to which this paragraph applies, shall:

(i) so far as it is able, take such measures as are necessary to protect the force or mission from the effects of mines, booby-traps and other devices in any area under its control;

(ii) if necessary in order effectively to protect such personnel, remove or render harmless, so far as it is able, all mines, booby-traps and other devices in that area; and

(iii) inform the head of the force or mission of the location of all known minefields, mined areas, mines, booby-traps and other devices in the area in which the force or mission is performing its functions and, so far as is feasible, make available to the head of the force or mission all information in its possession concerning such minefields, mined areas, mines, booby-traps and other devices.

3. Humanitarian and fact-finding missions of the United Nations System

(a) This paragraph applies to any humanitarian or fact-finding mission of the United Nations System.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a mission to which this paragraph applies, shall:

(i) provide the personnel of the mission with the protections set out in sub-paragraph 2(b)(i) of this Article; and

(ii) if access to or through any place under its control is necessary for the performance of the mission's functions and in order to provide the personnel of the mission with safe passage to or through that place:

(aa) unless on-going hostilities prevent, inform the head of the mission of a safe route to that place if such information is available; or

(bb) if information identifying a safe route is not provided in accordance with sub-paragraph (aa), so far as is necessary and feasible, clear a lane through minefields.

4. Missions of the International Committee of the Red Cross

(a) This paragraph applies to any mission of the International Committee of the Red Cross performing functions with the consent of the host State or States as provided for by the Geneva Conventions of 12 August 1949 and, where applicable, their Additional Protocols.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a mission to which this paragraph applies, shall:

(i) provide the personnel of the mission with the protections set out in sub-paragraph 2(b)(i) of this Article; and

(ii) take the measures set out in sub-paragraph 3(b)(ii) of this Article.

5. Other humanitarian missions and missions of enquiry

(a) Insofar as paragraphs 2, 3 and 4 above do not apply to them, this paragraph applies to the following missions when they are performing functions in the area of a conflict or to assist the victims of a conflict:

(i) any humanitarian mission of a national Red Cross or Red Crescent society or of their International Federation;

(ii) any mission of an impartial humanitarian organization, including any impartial humanitarian demining mission; and

(iii) any mission of enquiry established pursuant to the provisions of the Geneva Conventions of 12 August 1949 and, where applicable, their Additional Protocols.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a mission to which this paragraph applies, shall, so far as is feasible:

(i) provide the personnel of the mission with the protections set out in sub-paragraph 2(b)(i) of this Article; and

(ii) take the measures set out in sub-paragraph 3(b)(ii) of this Article.

6. Confidentiality

All information provided in confidence pursuant to this Article shall be treated by the recipient in strict confidence and shall not be released outside the force or mission concerned without the express authorization of the provider of the information.

7. Respect for laws and regulations

Without prejudice to such privileges and immunities as they may enjoy or to the requirements of their duties, personnel participating in the forces and missions referred to in this Article shall:

(a) respect the laws and regulations of the host State; and

(b) refrain from any action or activity incompatible with the impartial and international nature of their duties.

Article 13

Consultations of High Contracting Parties

1. The High Contracting Parties undertake to consult and cooperate with each other on all issues related to the operation of this Protocol. For this purpose, a conference of High Contracting Parties shall be held annually.

2. Participation in the annual conferences shall be determined by their agreed Rules of Procedure.

3. The work of the conference shall include:

(a) review of the operation and status of this Protocol;

(b) consideration of matters arising from reports by High Contracting Parties according to paragraph 4 of this Article;

(c) preparation for review conferences; and

(d) consideration of the development of technologies to protect civilians against indiscriminate effects of mines.

4. The High Contracting Parties shall provide annual reports to the Depositary, who shall circulate them to all High Contracting Parties in advance of the Conference, on any of the following matters:

(a) dissemination of information on this Protocol to their armed forces and to the civilian population;

(b) mine clearance and rehabilitation programmes;

(c) steps taken to meet technical requirements of this Protocol and any other relevant information pertaining thereto;

(d) legislation related to this Protocol;

(e) measures taken on international technical information exchange, on international cooperation on mine clearance, and on technical cooperation and assistance; and

(f) other relevant matters.

5. The cost of the Conference of High Contracting Parties shall be borne by the High Contracting Parties and States not parties participating in the work of the Conference, in accordance with the United Nations scale of assessment adjusted appropriately.

Article 14

Compliance

1. Each High Contracting Party shall take all appropriate steps, including legislative and other measures, to prevent and suppress violations of this Protocol by persons or on territory under its jurisdiction or control.

2. The measures envisaged in paragraph 1 of this Article include appropriate measures to ensure the imposition of penal sanctions against persons who, in relation to an armed conflict and contrary to the provisions of this Protocol, wilfully kill or cause serious injury to civilians and to bring such persons to justice.

3. Each High Contracting Party shall also require that its armed forces issue relevant military instructions and operating procedures and that armed forces personnel receive training commensurate with their duties and responsibilities to comply with the provisions of this Protocol.

4. The High Contracting Parties undertake to consult each other and to cooperate with each other bilaterally, through the Secretary-General of the United Nations or through other appropriate international procedures, to resolve any problems that may arise with regard to the interpretation and application of the provisions of this Protocol.

Technical Annex

1. Recording

(a) Recording of the location of mines other than remotely-delivered mines, minefields, mined areas, booby-traps and other devices shall be carried out in accordance with the following provisions:

(i) the location of the minefields, mined areas and areas of booby-traps and other devices shall be specified accurately by relation to the coordinates of at least two reference points and the estimated dimensions of the area containing these weapons in relation to those reference points;

(ii) maps, diagrams or other records shall be made in such a way as to indicate the location of minefields, mined areas, booby-traps and other devices in relation to reference points, and these records shall also indicate their perimeters and extent;

(iii) for purposes of detection and clearance of mines, booby-traps and other devices, maps, diagrams or other records shall contain complete information on the type, number, emplacing method, type of fuse and life time, date and time of laying, anti-handling devices (if any) and other relevant information on all these weapons laid. Whenever feasible the minefield record shall show the exact location of every mine, except in row minefields where the row location is sufficient. The precise location and operating mechanism of each booby-trap laid shall be individually recorded.

(b) The estimated location and area of remotely-delivered mines shall be specified by coordinates of reference points (normally corner points) and shall be ascertained and when feasible marked on the ground at the earliest opportunity. The total number and type of mines laid, the date and time of laying and the self-destruction time periods shall also be recorded.

(c) Copies of records shall be held at a level of command sufficient to guarantee their safety as far as possible.

(d) The use of mines produced after the entry into force of this Protocol is prohibited unless they are marked in English or in the respective national language or languages with the following information:

(i) name of the country of origin;
(ii) month and year of production; and
(iii) serial number or lot number.

The marking should be visible, legible, durable and resistant to environmental effects, as far as possible.

2. Specifications on detectability

(a) With respect to anti-personnel mines produced after 1 January 1997, such mines shall incorporate in their construction a material or device that enables the mine to be detected by commonly-available technical mine detection equipment and provides a response signal equivalent to a signal from 8 grammes or more of iron in a single coherent mass.

(b) With respect to anti-personnel mines produced before 1 January 1997, such mines shall either incorporate in their construction, or have attached prior to their emplacement, in a manner not easily removable, a material or device that enables the mine to be detected by commonly-available technical mine detection equipment and provides a response signal equivalent to a signal from 8 grammes or more of iron in a single coherent mass.

(c) In the event that a High Contracting Party determines that it cannot immediately comply with sub-paragraph (b), it may declare at the time of its notification of consent to be bound by this Protocol that it will defer compliance with sub-paragraph (b) for a period not to exceed 9 years from the entry into force of this Protocol. In the meantime it shall, to the extent feasible, minimize the use of anti-personnel mines that do not so comply.

3. Specifications on self-destruction and self-deactivation

(a) All remotely-delivered anti-personnel mines shall be designed and constructed so that no more than 10% of activated mines will fail to self-destruct within 30 days after emplacement, and each mine shall have a back-up self-deactivation feature designed and constructed so that, in combination with the self-destruction mechanism, no more than one in one thousand activated mines will function as a mine 120 days after emplacement.

(b) All non-remotely delivered anti-personnel mines, used outside marked areas, as defined in Article 5 of this Protocol, shall comply with the requirements for self-destruction and self-deactivation stated in sub-paragraph (a).

(c) In the event that a High Contracting Party determines that it cannot immediately comply with sub-paragraphs (a) and/or (b), it may declare at the time of its notification of consent to be bound by this Protocol, that it will, with respect to mines produced prior to the entry into force of this Protocol defer compliance with sub-paragraphs (a) and/or (b) for a period not to exceed 9 years from the entry into force of this Protocol.

During this period of deferral, the High Contracting Party shall:

(i) undertake to minimize, to the extent feasible, the use of anti-personnel mines that do not so comply, and

(ii) with respect to remotely-delivered anti-personnel mines, comply with either the requirements for self-destruction or the requirements for self-deactivation and, with respect to other anti-personnel mines comply with at least the requirements for self-deactivation.

4. International signs for minefields and mined areas

Signs similar to the example attached and as specified below shall be utilized in the marking of minefields and mined areas to ensure their visibility and recognition by the civilian population:

(a) size and shape: a triangle or square no smaller than 28 centimetres (11 inches) by 20 centimetres (7.9 inches) for a triangle, and 15 centimetres (6 inches) per side for a square;

(b) colour: red or orange with a yellow reflecting border;

(c) symbol: the symbol illustrated in the Attachment, or an alternative readily recognizable in the area in which the sign is to be displayed as identifying a dangerous area;

(d) language: the sign should contain the word "mines" in one of the six official languages of the Convention (Arabic, Chinese, English, French, Russian and Spanish) and the language or languages prevalent in that area;

(e) spacing: signs should be placed around the minefield or mined area at a distance sufficient to ensure their visibility at any point by a civilian approaching the area."

Attachment

Warning Sign for Areas
Containing Mines
MINES
MINES
20cm (8inches)
20cm (8inches)

ARTICLE 2: ENTRY INTO FORCE

This amended Protocol shall enter into force as provided for in paragraph 1 (b) of Article 8 of the Convention.

Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons And on Their Destruction

Preamble

The States Parties to this Convention,

Determined to act with a view to achieving effective progress towards general and complete disarmament under strict and effective international control, including the prohibition and elimination of all types of weapons of mass destruction,

Desiring to contribute to the realization of the purposes and principles of the Charter of the United Nations,

Recalling that the General Assembly of the United Nations has repeatedly condemned all actions contrary to the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925 (the Geneva Protocol of 1925),

Recognizing that this Convention reaffirms principles and objectives of and obligations assumed under the Geneva Protocol of 1925, and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction signed at London, Moscow and Washington on 10 April 1972,

Bearing in mind the objective contained in Article IX of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction,

Determined for the sake of all mankind, to exclude completely the possibility of the use of chemical weapons, through the implementation of the provisions of this Convention, thereby complementing the obligations assumed under the Geneva Protocol of 1925,

Recognizing the prohibition, embodied in the pertinent agreements and relevant principles of international law, of the use of herbicides as a method of warfare,

Considering that achievements in the field of chemistry should be used exclusively for the benefit of mankind,

Desiring to promote free trade in chemicals as well as international cooperation and exchange of scientific and technical information in the field of chemical activities for purposes not prohibited under this Convention in order to enhance the economic and technological development of all States Parties,

Convinced that the complete and effective prohibition of the development, production, acquisition, stockpiling, retention, transfer and use of chemical weapons, and their destruction, represent a necessary step towards the achievement of these common objectives,

Have agreed as follows:

Article I: General Obligations

1. Each State Party to this Convention undertakes never under any circumstances:

(a) To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone;

(b) To use chemical weapons;

(c) To engage in any military preparations to use chemical weapons;

(d) To assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention.

2. Each State Party undertakes to destroy chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, in accordance with the provisions of this Convention.

3. Each State Party undertakes to destroy all chemical weapons it abandoned on the territory *of* another State Party, in accordance with the provisions of this Convention.

4. Each State Party undertakes to destroy any chemical weapons production facilities it owns or possesses, or that are located in any place under its jurisdiction or control, in accordance with the provisions of this Convention.

5. Each State Party undertakes not to use riot control agents as a method of warfare.

Article II: Definitions and Criteria

For the purposes of this Convention:

1. "Chemical Weapons" means the following, together or separately:

(a) Toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes;

(b) Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals specified in subparagraph (a), which would be released as a result of the employment of such munitions and devices;

(c) Any equipment specifically designed for use directly in connection with the employment of munitions and devices specified in subparagraph (b).

2. "Toxic Chemical" means:

Any chemical which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals. This includes all such chemicals, regardless of their origin or of their method of production, and regardless of whether they are produced in facilities, in munitions or elsewhere.

(For the purpose of implementing this Convention, toxic chemicals which have been identified for the application of verification measures are listed in Schedules contained in the Annex on Chemicals.)

3. "Precursor" means:

Any chemical reactant which takes part at any stage in the production by whatever method of a toxic chemical. This includes any key component of a binary or multicomponent chemical system.

(For the purpose of implementing this Convention, precursors which have been identified for the application of verification measures are listed in Schedules contained in the Annex on Chemicals.)

4. "Key Component of Binary or Multicomponent Chemical Systems" (hereinafter referred to as "key component") means:

The precursor which plays the most important role in determining the toxic properties of the final product and reacts rapidly with other chemicals in the binary or multicomponent system.

5. "Old Chemical Weapons" means:

(a) Chemical weapons which were produced before 1925; or

(b) Chemical weapons produced in the period between 1925 and 1946 that have deteriorated to such extent that they can no longer be used as chemical weapons.

6. "Abandoned Chemical Weapons" means:

Chemical weapons, including old chemical weapons, abandoned by a State after 1 January 1925 on the territory of another State without the consent of the latter.

7. "Riot Control Agent" means:

Any chemical not listed in a Schedule, which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure.

8. "Chemical Weapons Production Facility":

(a) Means any equipment, as well as any building housing such equipment, that was designed, constructed or used at any time since 1 January 1946:

(i) As part of the stage in the production of chemicals ("final technological stage") where the material flows would contain, when the equipment is in operation:

(1) Any chemical listed in Schedule 1 in the Annex on Chemicals; or

(2) Any other chemical that has no use, above 1 tonne per year on the territory of a State Party or in any other place under the jurisdiction or control of a State Party, for purposes not prohibited under this Convention, but can be used for chemical weapons purposes;

or

(ii) For filling chemical weapons, including, *inter alia*, the filling of chemicals listed in Schedule 1 into munitions, devices or bulk storage containers the filling of chemicals into Containers that form part of assembled binary munitions and devices or into chemical submunitions that form part of assembled unitary munitions and devices, and the loading of the containers and chemical submunitions into the respective munitions and devices;

(b) Does not mean:

(i) Any facility having a production capacity for synthesis of chemicals specified in subparagraph (a) (i) that is less than 1 tonne;

(ii) Any facility in which a chemical specified in subparagraph (a) (i) is or was produced as an unavoidable by-product of activities for purposes not prohibited under this Convention, provided that the chemical does not exceed 3 per cent of the total product and that the facility is subject to declaration and inspection under the Annex on Implementation and Verification (hereinafter referred to as "Verification Annex"); or

(iii) The single small-scale facility for production of chemicals listed in Schedule 1 for purposes not prohibited under this Convention as referred to in Part VI of the Verification Annex.

9. "Purposes Not Prohibited Under this Convention" means:

(a) Industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes:

(b) Protective purposes, namely those purposes directly related to protection against toxic chemicals and to protection against chemical weapons;

(c) Military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare;

(d) Law enforcement including domestic riot control purposes.

10. "Production Capacity" means:

The annual quantitative potential for manufacturing a specific chemical based on the technological process actually used or, if the process is not yet operational, planned to be used at the relevant facility. It shall be deemed to be equal to the nameplate capacity or, if the nameplate capacity is not available, to the design capacity. The nameplate capacity is the product output under conditions optimized for maximum quantity for the production facility, as demonstrated by one or more test-runs. The design capacity is the corresponding theoretically calculated product output.

11. "Organization" means the Organization for the Prohibition of Chemical Weapons established pursuant to Article VIII of this Convention.

12. For the purposes of Article VI:

(a) "Production" of a chemical means its formation through chemical reaction;

(b) "Processing" of a chemical means a physical process, such as formulation, extraction and purification, in which a chemical is not converted into another chemical;

(c) "Consumption" of a chemical means its conversion into another chemical via a chemical reaction.

Article III: Declarations

1. Each State Party shall submit to the Organization, not later than 30 days after this Convention enters into force for it, the following declarations, in which it shall:

(a) With respect to chemical weapons:

(i) Declare whether it owns or possesses any chemical weapons, or whether there are any chemical weapons located in any place under its jurisdiction or control;

(ii) Specify the precise location, aggregate quantity and detailed inventory of chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, in accordance with Part IV (A), paragraphs 1 to 3, of the Verification Annex, except for those chemical weapons referred to in sub-subparagraph (iii);

(iii) Report any chemical weapons on its territory that are owned and possessed by another State and located in any place under the jurisdiction or control of another State, in accordance with Part IV (A), paragraph 4, of the Verification Annex;

(iv) Declare whether it has transferred or received, directly or indirectly, any chemical weapons since 1 January 1946 and specify the transfer or receipt of such weapons, in accordance with Part IV (A), paragraph 5, of the Verification Annex:

(v) Provide its general plan for destruction of chemical weapons that it owns or possesses, or that are located in any place under its jurisdiction or control, in accordance with Part IV (A), paragraph 6, of the Verification Annex;

(b) With respect to old chemical weapons and abandoned chemical weapons:

(i) Declare whether it has on its territory old chemical weapons and provide all available information in accordance with Part IV (B), paragraph 3, of the Verification Annex;

(ii) Declare whether there are abandoned chemical weapons on its territory and provide all available information in accordance with Part IV (B), paragraph 8, of the Verification Annex;

(iii) Declare whether it has abandoned chemical weapons on the territory of other States and provide all available information in accordance with Part IV (B), paragraph 10, of the Verification Annex;

(c) With respect to chemical weapons production facilities:

(i) Declare whether it has or has had any chemical weapons production facility under its ownership or possession, or that is or has been located in any place under its jurisdiction or control at any time since 1 January 1946;

(ii) Specify any chemical weapons production facility

it has or has had under its ownership or possession or that is or has been located in any place under its jurisdiction or control at any time since 1 January 1946, in accordance with Part V, paragraph 1, of the Verification Annex, except for those facilities referred to in sub-subparagraph (iii);

(iii) Report any chemical weapons production facility on its territory that another State has or has had under its ownership and possession and that is or has been located in any place under the jurisdiction or control of another State at any time since 1 January 1946, in accordance with Part V, paragraph 2, of the Verification Annex;

(iv) Declare whether it has transferred or received, directly or indirectly, any equipment for the production of chemical weapons since 1 January 1946 and specify the transfer or receipt of such equipment, in accordance with Part V, paragraphs 3 to 5, of the Verification Annex;

(v) Provide its general plan for destruction of any chemical weapons production facility it owns or possesses, or that is located in any place under its jurisdiction or control, in accordance with Part V, paragraph 6, of the Verification Annex;

(vi) Specify actions to be taken for closure of any chemical weapons production facility it owns or possesses, or that is located in any place under its jurisdiction or control, in accordance with Part V, paragraph 1 (i), of the Verification Annex;

(vii) Provide its general plan for any temporary conversion of any chemical weapons production facility it owns or possesses, or that is located in any place under its jurisdiction or control, into a chemical weapons destruction facility, in accordance with Part V, paragraph 7, of the Verification Annex;

(d) With respect to other facilities:

Specify the precise location, nature and general scope of activities of any facility or establishment under its ownership or possession, or located in any place under its jurisdiction or control, and that has been designed, constructed or used since 1 January 1946 primarily for development of chemical weapons. Such declaration shall include, *inter alia*, laboratories and test and evaluation sites;

(e) With respect to riot control agents: Specify the chemical name, structural formula and Chemical Abstracts Service (CAS) registry number, if assigned, of each chemical it holds for riot control purposes. This declaration shall be updated not later than 30 days after any change becomes effective.

2. The provisions of this Article and the relevant provisions of Part IV of the Verification Annex shall not, at the discretion of a State Party, apply to chemical weapons buried on its territory before 1 January 1977 and which remain buried, or which had been dumped at sea before 1 January 1985.

Article IV: Chemical Weapons

1. The provisions of this Article and the detailed procedures for its implementation shall apply to all chemical weapons owned or possessed by a State Party, or that are located in any place under its jurisdiction or control, except old chemical weapons and abandoned chemical weapons to which Part IV (B) of the Verification Annex applies.

2. Detailed procedures for the implementation of this Article are set forth in the Verification Annex.

3. All locations at which chemical weapons specified in paragraph 1 are stored or destroyed shall be subject to systematic verification through on-site inspection and monitoring with on-site instruments, in accordance with Part IV (A) of the Verification Annex.

4. Each State Party shall, immediately after the declaration under Article III, paragraph 1, has been submitted, provide access to chemical weapons specified in paragraph 1 for the purpose of systematic verification of the declaration through on-site inspection. Thereafter, each State Party shall not remove any of these chemical weapons, except to a chemical weapons destruction facility. It shall provide access to such chemical weapons, for the purpose of systematic on-site verification.

5. Each State Party shall provide access to any chemical weapons destruction facilities and their storage areas, that it owns or possesses, or that are located in any place under its jurisdiction or control, for the purpose of systematic verification through on-site inspection and monitoring with on-site instruments.

6. Each State Party shall destroy all chemical weapons specified in paragraph 1 pursuant to the Verification Annex and in accordance with the agreed rate and sequence of destruction (hereinafter referred to as "order of destruction"). Such destruction shall begin not later than two years after this Convention enters into force for it and shall finish not later than 10 years after entry into force of this Convention. A State Party is not precluded from destroying such chemical weapons at a faster rate.

7. Each State Party shall:

(a) Submit detailed plans for the destruction of chemical weapons specified in paragraph 1 not later than 60 days before each annual destruction period begins, in accordance with Part IV (A), paragraph 29, of the Verification Annex; the detailed plans shall encompass all stocks to be destroyed during the next annual destruction period;

(b) Submit declarations annually regarding the implementation of its plans for destruction of chemical weapons specified in paragraph 1, not later than 60 days after the end of each annual destruction period; and

(c) Certify, not later than 30 days after the destruction process has been completed, that all chemical weapons specified in paragraph 1 have been destroyed.

8. If a State ratifies or accedes to this Convention after the 10 year period for destruction set forth in paragraph 6, it shall destroy chemical weapons specified in paragraph 1 as soon as possible. The order of destruction and procedures for stringent verification for such a State Party shall be determined by the Executive Council.

9. Any chemical weapons discovered by a State Party after the initial declaration of chemical weapons shall be reported, secured and destroyed in accordance with Part IV (A) of the Verification Annex.

10. Each State Party, during transportation, sampling, storage and destruction of chemical weapons, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall transport, sample, store and destroy chemical weapons in accordance with its national standards for safety and emissions.

11. Any State Party which has on its territory chemical weapons that are owned or possessed by another State, or that are located in any place under the jurisdiction or control of another State, shall make the fullest efforts to ensure that these chemical weapons are removed from its territory not later than one year after this Convention enters into force for it. If they are not removed within one year, the State Party may request the Organization and other States Parties to provide assistance in the destruction of these chemical weapons.

12. Each State Party undertakes to cooperate with other States Parties that request information or assistance on a bilateral basis or through the Technical Secretariat regarding methods and technologies for the safe and efficient destruction of chemical weapons.

13. In carrying out verification activities pursuant to this Article and Part IV (A) of the Verification Annex, the Organization shall consider measures to avoid unnecessary duplication of bilateral or multilateral agreements on verification of chemical weapons storage and their destruction among States Parties.

To this end, the Executive Council shall decide to limit verification to measures complementary to those undertaken pursuant to such bilateral or multilateral agreement, if it considers that:

(a) Verification provisions of such an agreement are consistent with the verification provisions of this Article and Part IV (A) of

the Verification Annex;

(b) Implementation of such an agreement provides for sufficient assurance of compliance with the relevant provisions of this Convention; and

(c) Parties to the bilateral or multilateral agreement keep the Organization fully informed about their verification activities.

14. If the Executive Council takes a decision pursuant to paragraph 13, the Organization shall have the right to monitor the implementation of the bilateral or multilateral agreement.

15. Nothing in paragraphs 13 and 14 shall affect the obligation of a State Party to provide declarations pursuant to Article III, this Article and Part IV (A) of the Verification Annex.

16. Each State Party shall meet the costs of destruction of chemical weapons it is obliged to destroy. It shall also meet the costs of verification of storage and destruction of these chemical weapons unless the Executive Council decides otherwise. If the Executive Council decides to limit verification measures of the Organization pursuant to paragraph 13, the costs of complementary verification and monitoring by the Organization shall be paid in accordance with the United Nations scale of assessment, as specified in Article VIII, paragraph 7.

17. The provisions of this Article and the relevant provisions of Part IV of the Verification Annex shall not, at the discretion of a State Party, apply to chemical weapons buried on its territory before 1 January 1977 and which remain buried, or which had been dumped at sea before 1 January 1985.

Article V: Chemical Weapons Production Facilities

1. The provisions of this Article and the detailed procedures for its implementation shall apply to any and all chemical weapons production facilities owned or possessed by a State Party, or that are located in any place under its jurisdiction or control.

2. Detailed procedures for the implementation of this Article are set forth in the Verification Annex.

3. All chemical weapons production facilities specified in paragraph 1 shall be subject to systematic verification through on-site inspection and monitoring with on-site instruments in accordance with Part V of the Verification Annex.

4. Each State Party shall cease immediately all activity at chemical weapons production facilities specified in paragraph 1, except activity required for closure.

5. No State Party shall construct any new chemical weapons production facilities or modify any existing facilities for the purpose of chemical weapons production or for any other activity prohibited under this Convention.

6. Each State Party shall, immediately after the declaration under Article III, paragraph 1 (c), has been submitted, provide access to chemical weapons production facilities specified in paragraph 1, for the purpose of systematic verification of the declaration through on-site inspection.

7. Each State Party shall:

(a) Close, not later than 90 days after this Convention enters into force for it, all chemical weapons production facilities specified in paragraph 1, in accordance with Part V of the Verification Annex, and give notice thereof; and

(b) Provide access to chemical weapons production facilities specified in paragraph 1, subsequent to closure, for the purpose of systematic verification through on-site inspection and monitoring with on-site instruments in order to ensure that the facility remains closed and is subsequently destroyed.

8. Each State Party shall destroy all chemical weapons production facilities specified in paragraph 1 and related facilities and equipment, pursuant to the Verification Annex and in accordance with an agreed rate and sequence of destruction (hereinafter referred to as "order of destruction"). Such destruction shall begin not later than one year after this Convention enters into force for it, and shall finish not later than 10 years after entry into force of this Convention. A State Party is not precluded from destroying such facilities at a faster rate.

9. Each State Party shall:

(a) Submit detailed plans for destruction of chemical weapons production facilities specified in paragraph 1, not later than 180 days before the destruction of each facility begins;

(b) Submit declarations annually regarding the implementation of its plans for the destruction of all chemical weapons production facilities specified in paragraph 1, not later than 90 days after the end of each annual destruction period; and

(c) Certify, not later than 30 days after the destruction process has been completed, that all chemical weapons production facilities specified in paragraph 1 have been destroyed.

10. If a State ratifies or accedes to this Convention after the 10-year period for destruction set forth in paragraph 8, it shall destroy chemical weapons production facilities specified in paragraph 1 as soon as possible. The order of destruction and procedures for stringent verification for such a State Party shall be determined by the Executive Council.

11. Each State Party, during the destruction of chemical weapons production facilities, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall destroy these chemical weapons production facilities in accordance with its national standards for safety and emissions.

12. Chemical weapons production facilities specified in paragraph 1 may be temporarily converted for destruction of chemical weapons in accordance with Part V, paragraphs 18 to 25, of the Verification Annex. Such a converted facility must be destroyed as soon as it is no longer in use for destruction of chemical weapons but, in any case, not later than 10 years after entry into force of this Convention.

13. A State Party may request, in exceptional cases of compelling need, permission to use a chemical weapons production facility specified in paragraph 1 for purposes not prohibited under this Convention. Upon the recommendation of the Executive Council, the Conference of the States Parties shall decide whether or not to approve the request and shall establish the conditions upon which approval is contingent in accordance with Part V, Section D, of the Verification Annex.

14. The chemical weapons production facility shall be converted in such a manner that the converted facility is not more capable of being reconverted into a chemical weapons production facility than any other facility used for industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes not involving chemicals listed in Schedule 1.

15. All converted facilities shall be subject to systematic verification through on-site inspection and monitoring with on-site instruments in accordance with Part V, Section D, of the Verification Annex.

16. In carrying out verification activities pursuant to this Article and Part V of the Verification Annex, the Organization shall consider measures to avoid unnecessary duplication of bilateral or multilateral agreements on verification of chemical weapons production facilities and their destruction among States Parties.

To this end, the Executive Council shall decide to limit the verification to measures complementary to those undertaken pursuant to such a bilateral or multilateral agreement, if it considers that:

(a) Verification provisions of such an agreement are consistent with the verification provisions of this Article and Part V of the Verification Annex;

(b) Implementation of the agreement provides for sufficient assurance of compliance with the relevant provisions of this Convention; and

(c) Parties to the bilateral or multilateral agreement keep the Organization fully informed about their verification activities.

17. If the Executive Council takes a decision pursuant to paragraph 16, the Organization shall have the right to monitor the implementation of the bilateral or multilateral agreement.

18. Nothing in paragraphs 16 and 17 shall affect the obligation of a State Party to make declarations pursuant to Article III, this Article and Part V of the Verification Annex.

19. Each State Party shall meet the costs of destruction of chemical weapons production facilities it is obliged to destroy. It shall also meet the costs of verification under this Article unless the Executive Council decides otherwise. If the Executive Council decides to limit verification measures of the Organization pursuant to paragraph 16, the costs of complementary verification and monitoring by the Organization shall be paid in accordance with the United Nations scale of assessment, as specified in Article VIII, paragraph 7.

Article VI: Activities Not Prohibited Under This Convention

1. Each State Party has the right, subject to the provisions of this Convention, to develop, produce, otherwise acquire, retain, transfer and use toxic chemicals and their precursors for purposes not prohibited under this Convention.

2. Each State Party shall adopt the necessary measures to ensure that toxic chemicals and their precursors are only developed, produced, otherwise acquired, retained, transferred, or used within its territory or in any other place under its jurisdiction or control for purposes not prohibited under this Convention. To this end, and in order to verify that activities are in accordance with obligations under this Convention, each State Party shall subject toxic chemicals and their precursors listed in Schedules 1, 2 and 3 of the Annex on Chemicals, facilities related to such chemicals, and other facilities as specified in the Verification Annex, that are located on its territory or in any other place under its jurisdiction or control, to verification measures as provided in the Verification Annex.

3. Each State Party shall subject chemicals listed in Schedule 1 (hereinafter referred to as "Schedule 1 chemicals") to the prohibitions on production, acquisition, retention, transfer and use as specified in Part VI of the Verification Annex. It shall subject Schedule 1 chemicals and facilities specified in Part VI of the Verification Annex to systematic verification through on-site inspection and monitoring with on-site instruments in accordance with that Part of the Verification Annex.

4. Each State Party shall subject chemicals listed in Schedule 2 (hereinafter referred to as "Schedule 2 chemicals") and facilities specified in Part VII of the Verification Annex to data monitoring and on-site verification in accordance with that Part of the Verification Annex.

5. Each State Party shall subject chemicals listed in Schedule 3 (hereinafter referred to as "Schedule 3 chemicals") and facilities specified in Part VIII of the Verification Annex to data monitoring and on-site verification in accordance with that Part of the Verification Annex.

6. Each State Party shall subject facilities specified in Part IX of the Verification Annex to data monitoring and eventual on-site verification in accordance with that Part of the Verification Annex unless decided otherwise by the Conference of the States Parties pursuant to Part IX, paragraph 22, of the Verification Annex.

7. Not later than 30 days after this Convention enters into force for it, each State Party shall make an initial declaration on relevant chemicals and facilities in accordance with the Verification Annex.

8. Each State Party shall make annual declarations regarding the relevant chemicals and facilities in accordance with the Verification Annex.

9. For the purpose of on-site verification, each State Party shall grant to the inspectors access to facilities as required in the Verification Annex.

10. In conducting verification activities, the Technical Secretariat shall avoid undue intrusion into the State Party's chemical activities for purposes not prohibited under this Convention and, in particular, abide by the provisions set forth in the Annex on the Protection of Confidential Information (hereinafter referred to as "Confidentiality Annex").

11. The provisions of this Article shall be implemented in a manner which avoids hampering the economic or technological development of States Parties and international cooperation in the field of chemical activities for purposes not prohibited under this Convention, including the international exchange of scientific and technical information and chemicals and equipment for the production, processing or use of chemicals for purposes not prohibited under this Convention.

Article VII: National Implementation Measures

General undertakings

1. Each State Party shall, in accordance with its constitutional processes, adopt the necessary measures to implement its obligations under this Convention. In particular, it shall:

(a) Prohibit natural and legal persons anywhere on its territory or in any other place under its jurisdiction as recognized by international law from undertaking any activity prohibited to a State Party under this Convention, including enacting penal legislation with respect to such activity;

(b) Not permit in any place under its control any activity prohibited to a State Party under this Convention; and

(c) Extend its penal legislation enacted under subparagraph (a) to any activity prohibited to a State Party under this Convention undertaken anywhere by natural persons, possessing its nationality, in conformity with international law.

2. Each State Party shall cooperate with other States Parties and afford the appropriate form of legal assistance to facilitate the implementation of the obligations under paragraph 1.

3. Each State Party, during the implementation of its obligations under this Convention, shall assign the highest priority to ensuring the safety of people and to protecting the environment, and shall cooperate as appropriate with other States Parties in this regard.

Relations between the State Party and the Organization

4. In order to fulfill its obligations under this Convention, each State Party shall designate or establish a National Authority to serve as the national focal point for effective liaison with the Organization and other States Parties. Each State Party shall notify the Organization of its National Authority at the time that this Convention enters into force for it.

5. Each State Party shall inform the Organization of the legislative and administrative measures taken to implement this Convention.

6. Each State Party shall treat as confidential and afford special handling to information and data that it receives in confidence from the Organization in connection with the implementation of this Convention. It shall treat such information and data exclusively in connection with its rights and obligations under this Convention and in accordance with the provisions set forth in the Confidentiality Annex.

7. Each State Party undertakes to cooperate with the Organization in the exercise of all its functions and in particular to provide assistance to the Technical Secretariat.

Article VIII: The Organization

A. General Provisions

1. The States Parties to this Convention hereby establish the Organization for the Prohibition of Chemical Weapons to achieve the object and purpose of this Convention, to ensure the implementation of its provisions, including those for international verification of compliance with it, and to provide a forum for consultation and cooperation among States Parties.

2. All States Parties to this Convention shall be members of the Organization. A State Party shall not be deprived of its membership in the Organization.

3. The seat of the headquarters of the Organization shall be The Hague, Kingdom of the Netherlands.

4. There are hereby established as the organs of the Organization: the Conference of the States Parties, the Executive Council, and the Technical Secretariat.

5. The Organization shall conduct its verification activities provid

for under this Convention in the least intrusive manner possible consistent with the timely and efficient accomplishment of their objectives. It shall request only the information and data necessary to fulfill its responsibilities under this Convention. It shall take every precaution to protect the confidentiality of information on civil and military activities and facilities coming to its knowledge in the implementation of this Convention and, in particular, shall abide by the provisions set forth in the Confidentiality Annex.

6. In undertaking its verification activities the Organization shall consider measures to make use of advances in science and technology.

7. The costs of the Organization's activities shall be paid by States Parties in accordance with the United Nations scale of assessment adjusted to take into account differences in membership between the United Nations and this Organization, and subject to the provisions of Articles IV and V. Financial contributions of States Parties to the Preparatory Commission shall be deducted in an appropriate way from their contributions to the regular budget. The budget of the Organization shall comprise two separate chapters, one relating to administrative and other costs, and one relating to verification costs.

8. A member of the Organization which is in arrears in the payment of its financial contribution to the Organization shall have no vote in the Organization if the amount of its arrears equals or exceeds the amount of the contribution due from it for the preceding two full years. The Conference may, nevertheless, permit such a member to vote if it is satisfied that the failure to pay is due to conditions beyond the control of the member.

B. The Conference of the States Parties

Composition, procedures and decision-making

9. The Conference of the States Parties (hereinafter referred to as "the Conference") shall be composed of all members of this Organization. Each member shall have one representative in the Conference, who may be accompanied by alternates and advisers.

10. The first session of the Conference shall be convened by the depositary not later than 30 days after the entry into force of this Convention.

11. The Conference shall meet in regular sessions which shall be held annually unless it decides otherwise.

12. Special sessions of the Conference shall be convened:

(a) When decided by the Conference;

(b) When requested by the Executive Council;

(c) When requested by any member and supported by one third of the members; or

(d) In accordance with paragraph 22 to undertake reviews of the operation of this Convention.

Except in the case of subparagraph (d), the special session shall be convened not later than 30 days after receipt of the request by the Director-General of the Technical Secretariat, unless specified otherwise in the request.

13. The Conference shall also be convened in the form of an Amendment Conference in accordance with Article XV, paragraph 2.

14. Sessions of the Conference shall take place at the seat of the Organization unless the Conference decides otherwise.

15. The Conference shall adopt its rules of procedure. At the beginning of each regular session, it shall elect its Chairman and such other officers as may be required. They shall hold office until a new Chairman and other officers are elected at the next regular session.

16. A majority of the members of the Organization shall constitute a quorum for the Conference.

17. Each member of the Organization shall have one vote in the Conference.

18. The Conference shall take decisions on questions of procedure by a simple majority of the members present and voting. Decisions on matters of substance should be taken as far as possible by consensus. If consensus is not attainable when an issue comes up for decision, the Chairman shall defer any vote for 24 hours and during this period of deferment shall make every effort to facilitate achievement of consensus, and shall report to the Conference before the end of this period. If consensus is not possible at the end of 24 hours, the Conference shall take the decision by a two-thirds majority of members present and voting unless specified otherwise in this Convention. When the issue arises as to whether the question is one of substance or not, that question shall be treated as a matter of substance unless otherwise decided by the Conference by the majority required for decisions on matters of substance.

Powers and functions

19. The Conference shall be the principal organ of the Organization. It shall consider any questions, matters or issues within the scope of this Convention, including those relating to the powers and functions of the Executive Council and the Technical Secretariat. It may make recommendations and take decisions on any questions, matters or issues related to this Convention raised by a State Party or brought to its attention by the Executive Council.

20. The Conference shall oversee the implementation of this Convention, and act in order to promote its object and purpose. The Conference shall review compliance with this Convention. It shall also oversee the activities of the Executive Council and the Technical Secretariat and may issue guidelines in accordance with this Convention to either of them in the exercise of their functions.

The Conference shall:

(a) Consider and adopt at its regular sessions the report, programme and budget of the Organization, submitted by the Executive Council, as well as consider other reports;

(b) Decide on the scale of financial contributions to be paid by States Parties in accordance with paragraph 7;

(c) Elect the members of the Executive Council;

(d) Appoint the Director-General of the Technical Secretariat (hereinafter referred to as "the Director-General");

(e) Approve the rules of procedure of the Executive Council submitted by the latter;

(f) Establish such subsidiary organs as it finds necessary for the exercise of its functions in accordance with this Convention;

(g) Foster international cooperation for peaceful purposes in the field of chemical activities;

(h) Review scientific and technological developments that could affect the operation of this Convention and, in this context, direct the Director-General to establish a Scientific Advisory Board to enable him, in the performance of his functions, to render specialized advice in areas of science and technology relevant to this Convention, to the Conference, the Executive Council or States Parties. The Scientific Advisory Board shall be composed of independent experts appointed in accordance with terms of reference adopted by the Conference;

(i) Consider and approve at its first session any draft agreements, provisions and guidelines developed by the Preparatory Commission;

(j) Establish at its first session the voluntary fund for assistance in accordance with Article X;

(k) Take the necessary measures to ensure compliance with this Convention and to redress and remedy any situation which contravenes the provisions of this Convention, in accordance with Article XII.

22. The Conference shall not later than one year after the expiry of the fifth and the tenth year after the entry into force of this Convention, and at such other times within that time period as may be decided upon, convene in special sessions to undertake reviews of the operation of this Convention. Such reviews shall take into account any relevant scientific and technological developments. At intervals of five years thereafter, unless otherwise decided upon, further sessions of the Conference shall be convened with the same objective.

C. The Executive Council

Composition, procedure and decision-making

23. The Executive Council shall consist of 41 members. Each State Party shall have the right, in accordance with the principle of rotation, to serve on the Executive Council. The members of the Executive Council shall be elected by the Conference for a term of two years. In order to ensure the effective functioning of this Convention, due regard being specially paid to equitable geographical distribution, to the importance of chemical industry, as well as to political and security interests, the Executive Council shall be composed as follows:

(a) Nine States Parties from Africa to be designated by States Parties located in this region. As a basis for this designation it is understood that, out of these nine States Parties, three members shall, as a rule, be the States Parties with the most significant national chemical industry in the region as determined by internationally reported and published data; in addition, the regional group shall agree also to take into account other regional factors in designating these three members;

(b) Nine States Parties from Asia to be designated by States Parties located in this region. As a basis for this designation it is understood that, out of these nine States Parties, four members shall, as a rule, be the States Parties with the most significant national chemical industry in the region as determined by internationally reported and published data: in addition, the regional group shall agree also to take into account other regional factors in designating these four members;

(c) Five States Parties from Eastern Europe to be designated by States Parties located in this region. As a basis for this designation it is understood that, out of these five States Parties, one member shall, as a rule, be the State Party with the most significant national chemical industry in the region as determined by internationally reported and published data; in addition, the regional group shall agree also to take into account other regional factors in designating this one member;

(d) Seven States Parties from Latin America and the Caribbean to be designated by States Parties located in this region. As a basis for this designation it is understood that, out of these seven States Parties, three members shall, as a rule, be the States Parties with the most significant national chemical industry in the region as determined by internationally reported and published data; in addition, the regional group shall agree also to take into account other regional factors in designating these three members;

(e) Ten States Parties from among Western European and Other States to be designated by States Parties located in this region. As a basis for this designation it is understood that, out of these ten States Parties, five members shall, as a rule, be the States Parties with the most significant national chemical industry in the region as determined by internationally reported and published data; in addition, the regional group shall agree also to take into account other regional factors in designating these five members;

(f) One further State Party to be designated consecutively by States Parties located in the regions of Asia and Latin America and the Caribbean. As a basis for this designation it is understood that this State Party shall be a rotating member from these regions.

24. For the first election of the Executive Council 20 members shall be elected for a term of one year, due regard being paid to the established numerical proportions as described in paragraph 23.

25. After the full implementation of Articles IV and V the Conference may, upon the request of a majority of the members of the Executive Council, review the composition of the Executive Council taking into account developments related to the principles specified in paragraph 23 that are governing its composition.

26. The Executive Council shall elaborate its rules of procedure and submit them to the Conference for approval.

27. The Executive Council shall elect its Chairman from among its members.

28. The Executive Council shall meet for regular sessions. Between regular sessions it shall meet as often as may be required for the fulfillment of its powers and functions.

29. Each member of the Executive Council shall have one vote. Unless otherwise specified in this Convention, the Executive Council shall take decisions on matters of substance by a two-thirds majority of all its members. The Executive Council shall take decisions on questions of procedure by a simple majority of all its members. When the issue arises as to whether the question is one of substance or not, that question shall be treated as a matter of substance unless otherwise decided by the Executive Council by the majority required for decisions on matters of substance.

Powers and functions

30. The Executive Council shall be the executive organ of the Organization. It shall be responsible to the Conference. The Executive Council shall carry out the powers and functions entrusted to it under this Convention, as well as those functions delegated to it by the Conference. In so doing, it shall act in conformity with the recommendations, decisions and guidelines of the Conference and assure their proper and continuous implementation.

31. The Executive Council shall promote the effective implementation of, and compliance with, this Convention. It shall supervise the activities of the Technical Secretariat, cooperate with the National Authority of each State Party and facilitate consultations and cooperation among States Parties at their request.

32. The Executive Council shall:

(a) Consider and submit to the Conference the draft programme and budget of the Organization;

(b) Consider and submit to the Conference the draft report of the Organization on the implementation of this Convention, the report on the performance of its own activities and such special reports as it deems necessary or which the Conference may request;

(c) Make arrangements for the sessions of the Conference including the preparation of the draft agenda.

33. The Executive Council may request the convening of a special session of the Conference.

34. The Executive Council shall:

(a) Conclude agreements or arrangements with States and international organizations on behalf of the Organization, subject to prior approval by the Conference;

(b) Conclude agreements with States Parties on behalf of the Organization in connection with Article X and supervise the voluntary fund referred to in Article X;

(c) Approve agreements or arrangements relating to the implementation of verification activities, negotiated by the Technical Secretariat with States Parties.

35. The Executive Council shall consider any issue or matter within its competence affecting this Convention and its implementation, including concerns regarding compliance, and cases of non-compliance, and, as appropriate, inform States Parties and bring the issue or matter to the attention of the Conference.

36. In its consideration of doubts or concerns regarding compliance and cases of non-compliance, including, *inter alia*, abuse of the rights provided for under this Convention, the Executive Council shall consult with the States Parties involved and, as appropriate, request the State Party to take measures to redress the situation within a specified time. To the extent that the Executive Council considers further action to be necessary, it shall take, *inter alia*, one or more of the following measures:

(a) Inform all States Parties of the issue or matter;

(b) Bring the issue or matter to the attention of the Conference;

(c) Make recommendations to the Conference regarding

measures to redress the situation and to ensure compliance.

The Executive Council shall, in cases of particular gravity and urgency, bring the issue or matter, including relevant information and conclusions, directly to the attention of the United Nations General Assembly and the United Nations Security Council. It shall at the same time inform all States Parties of this step.

D. The Technical Secretariat

37. The Technical Secretariat shall assist the Conference and the Executive Council in the performance of their functions. The Technical Secretariat shall carry out the verification measures provided for in this Convention. It shall carry out the other functions entrusted to it under this Convention as well as those functions delegated to it by the Conference and the Executive Council.

38. The Technical Secretariat shall:

(a) Prepare and submit to the Executive Council the draft programme and budget of the Organization;

(b) Prepare and submit to the Executive Council the draft report of the Organization on the implementation of this Convention and such other reports as the Conference or the Executive Council may request;

(c) Provide administrative and technical support to the Conference, the Executive Council and subsidiary organs;

(d) Address and receive communications on behalf of the Organization to and from States Parties on matters pertaining to the implementation of this Convention;

(e) Provide technical assistance and technical evaluation to States Parties in the implementation of the provisions of this Convention, including evaluation of scheduled and unscheduled chemicals.

39. The Technical Secretariat shall:

(a) Negotiate agreements or arrangements relating to the implementation of verification activities with States Parties, subject to approval by the Executive Council;

(b) Not later than 180 days after entry into force of this Convention, coordinate the establishment and maintenance of permanent stockpiles of emergency and humanitarian assistance by States Parties in accordance with Article X, paragraphs 7 (b) and (c). The Technical Secretariat may inspect the items maintained for serviceability. Lists of items to be stockpiled shall be considered and approved by the Conference pursuant to paragraph 21 (i) above;

(c) Administer the voluntary fund referred to in Article X, compile declarations made by the States Parties and register, when requested, bilateral agreements concluded between States Parties or between a State Party and the Organization for the purposes of Article X.

40. The Technical Secretariat shall inform the Executive Council of any problem that has arisen with regard to the discharge of its functions, including doubts, ambiguities or uncertainties about compliance with this Convention that have come to its notice in the performance of its verification activities and that it has been unable to resolve or clarify through its consultations with the State Party concerned.

41. The Technical Secretariat shall comprise a Director-General, who shall be its head and chief administrative officer, inspectors and such scientific, technical and other personnel as may be required.

42. The Inspectorate shall be a unit of the Technical Secretariat and shall act under the supervision of the Director-General.

43 The Director-General shall be appointed by the Conference upon the recommendation of the Executive Council for a term of four years, renewable for one further term, but not thereafter.

44. The Director-General shall be responsible to the Conference and the Executive Council for the appointment of the staff and the organization and functioning of the Technical Secretariat. The paramount consideration in the employment of the staff and in the determination of the conditions of service shall be the necessity of securing the highest standards of efficiency, competence and integrity. Only citizens of States Parties shall serve as the Director-General, as inspectors or as other members of the professional and clerical staff. Due regard shall be paid to the importance of recruiting the staff on as wide a geographical basis as possible. Recruitment shall be guided by the principle that the staff shall be kept to a minimum necessary for the proper discharge of the responsibilities of the Technical Secretariat.

45. The Director-General shall be responsible for the organization and functioning of the Scientific Advisory Board referred to in paragraph 21 (h). The Director-General shall, in consultation with States Parties, appoint members of the Scientific Advisory Board, who shall serve in their individual capacity. The members of the Board shall be appointed on the basis of their expertise in the particular scientific fields relevant to the implementation of this Convention. The Director-General may also, as appropriate, in consultation with members of the Board, establish temporary working groups of scientific experts to provide recommendations on specific issues. In regard to the above, States Parties may submit lists of experts to the Director-General.

46. In the performance of their duties, the Director-General, the inspectors and the other members of the staff shall not see or receive instructions from any Government or from any other source external to the Organization. They shall refrain from any action that might reflect on their positions as international officers responsible only to the Conference and the Executive Council.

47. Each State Party shall respect the exclusively international character of the responsibilities of the Director-General, the inspectors and the other members of the staff and not seek to influence them in the discharge of their responsibilities.

E. Privileges and Immunities

48. The Organization shall enjoy on the territory and in any other place under the jurisdiction or control of a State Party such legal capacity and such privileges and immunities as are necessary for the exercise of its functions.

49. Delegates of States Parties, together with their alternates and advisers, representatives appointed to the Executive Council together with their alternates and advisers, the Director-General and the staff of the Organization shall enjoy such privileges and immunities as are necessary in the independent exercise of their functions in connection with the Organization.

50. The legal capacity, privileges, and immunities referred to in this Article shall be defined in agreements between the Organization and the States Parties as well as in an agreement between the Organization and the State in which the headquarters of the Organization is seated. These agreements shall be considered and approved by the Conference pursuant to paragraph 21 (i).

51. Notwithstanding paragraphs 48 and 49, the privileges and immunities enjoyed by the Director-General and the staff of the Technical Secretariat during the conduct of verification activities shall be those set forth in Part II, Section B, of the Verification Annex.

Article IX: Consultations, Cooperation and Fact-Finding

1. States Parties shall consult and cooperate, directly among themselves, or through the Organization or other appropriate international procedures, including procedures within the framework of the United Nations and in accordance with its Charter, on any matter which may be raised relating to the object and purpose, or the implementation of the provisions, of this Convention.

2. Without prejudice to the right of any State Party to request a challenge inspection, States Parties should, whenever possible, first make every effort to clarify and resolve, through exchange of information and consultations among themselves, any matter which may cause doubt about compliance with this Convention, or which gives rise to concerns about a related matter which may be considered ambiguous. A State Party which receives a request from another State Party for clarification of any matter which the requesting State Party believes causes such a doubt or concern shall provide the requesting State Party as soon as possible, but in any case not later than 10 days after the

request, with information sufficient to answer the doubt or concern raised along with an explanation of how the information provided resolves the matter. Nothing in this Convention shall affect the right of any two or more States Parties to arrange by mutual consent for inspections or any other procedures among themselves to clarify and resolve any matter which may cause doubt about compliance or gives rise to a concern about a related matter which may be considered ambiguous. Such arrangements shall not affect the rights and obligations of any State Party under other provisions of this Convention.

Procedure for requesting clarification

3. A State Party shall have the right to request the Executive Council to assist in clarifying any situation which may be considered ambiguous or which gives rise to a concern about the possible non-compliance of another State Party with this Convention. The Executive Council shall provide appropriate information in its possession relevant to such a concern.

4. A State Party shall have the right to request the Executive Council to obtain clarification from another State Party on any situation which may be considered ambiguous or which gives rise to a concern about its possible non-compliance with this Convention. In such a case, the following shall apply:

(a) The Executive Council shall forward the request for clarification to the State Party concerned through the Director-General not later than 24 hours after its receipt;

(b) The requested State Party shall provide the clarification to the Executive Council as soon as possible, but in any case not later than 10 days after the receipt of the request;

(c) The Executive Council shall take note of the clarification and forward it to the requesting State Party not later than 24 hours after its receipt;

(d) If the requesting State Party deems the clarification to be inadequate, it shall have the right to request the Executive Council to obtain from the requested State Party further clarification;

(e) For the purpose of obtaining further clarification requested under subparagraph (d), the Executive Council may call on the Director-General to establish a group of experts from the Technical Secretariat, or if appropriate staff are not available in the Technical Secretariat, from elsewhere, to examine all available information and data relevant to the situation causing the concern. The group of experts shall submit a factual report to the Executive Council on its findings;

(f) If the requesting State Party considers the clarification obtained under subparagraphs (d) and (e) to be unsatisfactory, it shall have the right to request a special session of the Executive Council in which States Parties involved that are not members of the Executive Council shall be entitled to take part. In such a special session, the Executive Council shall consider the matter and may recommend any measure it deems appropriate to resolve the situation.

5. A State Party shall also have the right to request the Executive Council to clarify any situation which has been considered ambiguous or has given rise to a concern about its possible non-compliance with this Convention. The Executive Council shall respond by providing such assistance as appropriate.

6. The Executive Council shall inform the States Parties about any request for clarification provided in this Article.

7. If the doubt or concern of a State Party about a possible non-compliance has not been resolved within 60 days after the submission of the request for clarification to the Executive Council, or it believes its doubts warrant urgent consideration, notwithstanding its right to request a challenge inspection, it may request a special session of the Conference in accordance with Article VIII, paragraph 12 (c). At such a special session, the Conference shall consider the matter and may recommend any measure it deems appropriate to resolve the situation.

Procedures for Challenge Inspections

8. Each State Party has the right to request an on-site challenge inspection of any facility or location in the territory or in any other place under the jurisdiction or control of any other State Party for the sole purpose of clarifying and resolving any questions concerning possible non-compliance with the provisions of this Convention, and to have this inspection conducted anywhere without delay by an inspection team designated by the Director-General and in accordance with the Verification Annex.

9. Each State Party is under the obligation to keep the inspection request within the scope of this Convention and to provide in the inspection request all appropriate information on the basis of which a concern has arisen regarding possible non-compliance with this Convention as specified in the Verification Annex. Each State Party shall refrain from unfounded inspection requests, care being taken to avoid abuse. The challenge inspection shall be carried out for the sole purpose of determining facts relating to the possible non-compliance.

10. For the purpose of verifying compliance with the provisions of this Convention, each State Party shall permit the Technical Secretariat to conduct the on-site challenge inspection pursuant to paragraph 8.

11. Pursuant to a request for a challenge inspection of a facility or location, and in accordance with the procedures provided for in the Verification Annex, the inspected State Party shall have:

(a) The right and the obligation to make every reasonable effort to demonstrate its compliance with this Convention and, to this end, to enable the inspection team to fulfill its mandate;

(b) The obligation to provide access within the requested site for the sole purpose of establishing facts relevant to the concern regarding possible non-compliance; and

(c) The right to take measures to protect sensitive installations, and to prevent disclosure of confidential information and data, not related to this Convention.

12. With regard to an observer, the following shall apply:

(a) The requesting State Party may, subject to the agreement of the inspected State Party, send a representative who may be a national either of the requesting State Party or of a third State Party, to observe the conduct of the challenge inspection.

(b) The inspected State Party shall then grant access to the observer in accordance with the Verification Annex.

(c) The inspected State Party shall, as a rule, accept the proposed observer, but if the inspected State Party exercises a refusal, that fact shall be recorded in the final report.

13. The requesting State Party shall present an inspection request for an on-site challenge inspection to the Executive Council and at the same time to the Director-General for immediate processing.

14. The Director-General shall immediately ascertain that the inspection request meets the requirements specified in Part X, paragraph 4, of the Verification Annex, and, if necessary, assist the requesting State Party in filing the inspection request accordingly. When the inspection request fulfills the requirements, preparations for the challenge inspection shall begin.

15. The Director-General shall transmit the inspection request to the inspected State Party not less than 12 hours before the planned arrival of the inspection team at the point of entry.

16. After having received the inspection request, the Executive Council shall take cognizance of the Director-General's actions on the request and shall keep the case under its consideration throughout the inspection procedure. However, its deliberations shall not delay the inspection process.

17. The Executive Council may, not later than 12 hours after having received the inspection request, decide by a three-quarter majority of all its members against carrying out the challenge inspection, if it considers the inspection request to be frivolous, abusive or clearly beyond the scope of this Convention as described in paragraph 9. Neither the requesting nor the inspected State Party shall participate in such a decision. If the Executive Council decides against the challenge inspection, preparations shall be stopped, no further action on

inspection request shall be taken, and the States Parties concerned shall be informed accordingly.

18. The Director-General shall issue an inspection mandate for the conduct of the challenge inspection. The inspection mandate shall be the inspection request referred to in paragraphs 8 and 9 put into operational terms, and shall conform with the inspection request.

19. The challenge inspection shall be conducted in accordance with Part X or, in the case of alleged use, in accordance with Part XI of the Verification Annex. The inspection team shall be guided by the principle of conducting the challenge inspection in the least intrusive manner possible, consistent with the effective and timely accomplishment of its mission.

20. The inspected State Party shall assist the inspection team throughout the challenge inspection and facilitate its task. If the inspected State Party proposes, pursuant to Part X, Section C, of the Verification Annex, arrangements to demonstrate compliance with this Convention, alternative to full and comprehensive access, it shall make every reasonable effort, through consultations with the inspection team, to reach agreement on the modalities for establishing the facts with the aim of demonstrating its compliance.

21. The final report shall contain the factual findings as well as an assessment by the inspection team of the degree and nature of access and cooperation granted for the satisfactory implementation of the challenge inspection. The Director-General shall promptly transmit the final report of the inspection team to the requesting State Party, to the inspected State Party, to the Executive Council and to all other States Parties. The Director-General shall further transmit promptly to the Executive Council the assessments of the requesting and of the inspected States Parties, as well as the views of other States Parties which may be conveyed to the Director-General for that purpose, and then provide them to all States Parties.

22. The Executive Council shall, in accordance with its powers and functions, review the final report of the inspection team as soon as it is presented, and address any concerns as to:

(a) Whether any non-compliance has occurred;

(b) Whether the request had been within the scope of this Convention; and

(c) Whether the right to request a challenge inspection had been abused.

23. If the Executive Council reaches the conclusion, in keeping with its powers and functions, that further action may be necessary with regard to paragraph 22, it shall take the appropriate measures to redress the situation and to ensure compliance with this Convention, including specific recommendations to the Conference. In the case of abuse, the Executive Council shall examine whether the requesting State Party should bear any of the financial implications of the challenge inspection.

24. The requesting State Party and the inspected State Party shall have the right to participate in the review process. The Executive Council shall inform the States Parties and the next session of the Conference of the outcome of the process.

25. If the Executive Council has made specific recommendations to the Conference, the Conference shall consider action in accordance with Article XII.

Article X: Assistance and Protection Against Chemical Weapons

1. For the purposes of this Article, "Assistance" means the coordination and delivery to States Parties of protection against chemical weapons, including, *inter alia*, the following: detection equipment and alarm systems; protective equipment; decontamination equipment and decontaminants; medical antidotes and treatments; and advice on any of these protective measures.

2. Nothing in this Convention shall be interpreted as impeding the right of any State Party to conduct research into, develop, produce, acquire, transfer or use means of protection against chemical weapons, for purposes not prohibited under this Convention.

3. Each State Party undertakes to facilitate, and shall have the right to participate in, the fullest possible exchange of equipment, material and scientific and technological information concerning means of protection against chemical weapons.

4. For the purposes of increasing the transparency of national programmes related to protective purposes, each State Party shall provide annually to the Technical Secretariat information on its programme, in accordance with procedures to be considered and approved by the Conference pursuant to Article VIII, paragraph 21 (i).

5. The Technical Secretariat shall establish, not later than 180 days after entry into force of this Convention and maintain, for the use of any requesting State Party, a data bank containing freely available information concerning various means of protection against chemical weapons as well as such information as may be provided by States Parties.

The Technical Secretariat shall also, within the resources available to it, and at the request of a State Party, provide expert advice and assist the State Party in identifying how its programmes for the development and improvement of a protective capacity against chemical weapons could be implemented.

6. Nothing in this Convention shall be interpreted as impeding the right of States Parties to request and provide assistance bilaterally and to conclude individual agreements with other States Parties concerning the emergency procurement of assistance.

7. Each State Party undertakes to provide assistance through the Organization and to this end to elect to take one or more of the following measures:

(a) To contribute to the voluntary fund for assistance to be established by the Conference at its first session;

(b) To conclude, if possible not later than 180 days after this Convention enters into force for it, agreements with the Organization concerning the procurement, upon demand, of assistance;

(c) To declare, not later than 180 days after this Convention enters into force for it, the kind of assistance it might provide in response to an appeal by the Organization. If, however, a State Party subsequently is unable to provide the assistance envisaged in its declaration, it is still under the obligation to provide assistance in accordance with this paragraph.

8. Each State Party has the right to request and, subject to th procedures set forth in paragraphs 9, 10 an 11, to receive assistance an protection against the use or threat of use of chemical weapons if i considers that:

(a) Chemical weapons have been used against it;

(b) Riot control agents have been used against it as a method of warfare; or

(c) It is threatened by actions or activities of any State that are prohibited for States Parties by Article I.

9. The request, substantiated by relevant information, shall be sul mitted to the Director-General, who shall transmit it immediately to th Executive Council and to all States Parties. The Director-General sha immediately forward the request to States Parties which have volu teered, in accordance with paragraphs 7 (b) and (c), to dispatch eme gency assistance in case of use of chemical weapons or use of riot contr agents as a method of warfare, or humanitarian assistance in case serious threat of use of chemical weapons or serious threat of use of ri control agents as a method of warfare to the State Party concerned r later than 12 hours after receipt of the request. The Director-Gene shall initiate, not later than 24 hours after receipt of the request, investigation in order to provide foundation for further action. He sh complete the investigation within 72 hours and forward a report to t Executive Council. If additional time is required for completion of t investigation, an interim report shall be submitted within the sa time-frame. The additional time required for investigation shall exceed 72 hours. It may, however, be further extended by sim periods. Reports at the end of each additional period shall be submit

to the Executive Council. The investigation shall, as appropriate and in conformity with the request and the information accompanying the request, establish relevant facts related to the request as well as the type and scope of supplementary assistance and protection needed.

10. The Executive Council shall meet not later than 24 hours after receiving an investigation report to consider the situation and shall take a decision by simple majority within the following 24 hours on whether to instruct the Technical Secretariat to provide supplementary assistance. The Technical Secretariat shall immediately transmit to all States Parties and relevant international organizations the investigation report and the decision taken by the Executive Council. When so decided by the Executive Council, the Director-General shall provide assistance immediately. For this purpose, the Director-General may cooperate with the requesting State Party, other States Parties and relevant international organizations. The States Parties shall make the fullest possible efforts to provide assistance.

11. If the information available from the ongoing investigation or other reliable sources would give sufficient proof that there are victims of use of chemical weapons and immediate action is indispensable, the Director-General shall notify all States Parties and shall take emergency measures of assistance, using the resources the Conference has placed at his disposal for such contingencies. The Director-General shall keep the Executive Council informed of actions undertaken pursuant to this paragraph.

Article XI: Economic and Technological Development

1. The provisions of this Convention shall be implemented in a manner which avoids hampering the economic or technological development of States Parties, and international cooperation in the field of chemical activities for purposes not prohibited under this Convention including the international exchange of scientific and technical information and chemicals and equipment for the production, processing or use of chemicals for purposes not prohibited under this Convention.

2. Subject to the provisions of this Convention and without prejudice to the principles and applicable rules of international law, the States Parties shall:

(a) Have the right, individually or collectively, to conduct research with, to develop, produce, acquire, retain, transfer, and use chemicals;

(b) Undertake to facilitate, and have the right to participate in, the fullest possible exchange of chemicals, equipment and scientific and technical information relating to the development and application of chemistry for purposes not prohibited under this Convention;

(c) Not maintain among themselves any restrictions, including those in any international agreements, incompatible with the obligations undertaken under this Convention, which would restrict or impede trade and the development and promotion of scientific and technological knowledge in the field of chemistry for industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes;

(d) Not use this Convention as grounds for applying any measures other than those provided for, or permitted, under this Convention nor use any other international agreement for pursuing an objective inconsistent with this Convention;

(e) Undertake to review their existing national regulations in the field of trade in chemicals in order to render them consistent with the object and purpose of this Convention.

Article XII: Measures to Redress a Situation and to Ensure Compliance, Including Sanctions

1. The Conference shall take the necessary measures, as set forth in paragraphs 2, 3 and 4, to ensure compliance with this Convention and to redress and remedy any situation which contravenes the provisions of this Convention. In considering action pursuant to this paragraph, the Conference shall take into account all information and recommendations on the issues submitted by the Executive Council.

2. In cases where a State Party has been requested by the Executive Council to take measures to redress a situation raising problems with regard to its compliance, and where the State Party fails to fulfill the request within the specified time, the Conference may, *inter alia*, upon the recommendation of the Executive Council, restrict or suspend the State Party's rights and privileges under this Convention until it undertakes the necessary action to conform with its obligations under this Convention.

3. In cases where serious damage to the object and purpose of this Convention may result from activities prohibited under this Convention, in particular by Article I, the Conference may recommend collective measures to States Parties in conformity with international law.

4. The Conference shall in cases of particular gravity, bring the issue, including relevant information and conclusions, to the attention of the United Nations General Assembly and the United Nations Security Council.

Article XIII: Relation to Other International Agreements

Nothing in this Convention shall be interpreted as in any way limiting or detracting from the obligations assumed by any State under the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and under the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed at London, Moscow and Washington on 10 April 1972.

Article XIV: Settlement of Disputes

1. Disputes that may arise concerning the application or the interpretation of this Convention shall be settled in accordance with the relevant provisions of this Convention and in conformity with the provisions of the Charter of the United Nations.

2. When a dispute arises between two or more States Parties, or between one or more States Parties and the Organization, relating to the interpretation or application of this Convention, the parties concerned shall consult together with a view to the expeditious settlement of the dispute by negotiation or by other peaceful means of the parties' choice, including recourse to appropriate organs of this Convention and, by mutual consent, referral to the International Court of Justice in conformity with the Statute of the Court. The States Parties involved shall keep the Executive Council informed of actions being taken.

3. The Executive Council may contribute to the settlement of a dispute by whatever means it deems appropriate, including offering its good offices, calling upon the States Parties to a dispute to start the settlement process of their choice and recommending a time-limit for any agreed procedure.

4. The Conference shall consider questions related to disputes raised by States Parties or brought to its attention by the Executive Council. The Conference shall, as it finds necessary, establish or entrust organs with tasks related to the settlement of these disputes in conformity with Article VIII, paragraph 21 (f).

5. The Conference and the Executive Council are separately empowered, subject to authorization from the General Assembly of the United Nations, to request the International Court of Justice to give an advisory opinion on any legal question arising within the scope of the activities of the Organization. An agreement between the Organization and the United Nations shall be concluded for this purpose in accordance with Article VIII, paragraph 34 (a).

6. This Article is without prejudice to Article IX or to the provisions on measures to redress a situation and to ensure compliance, including sanctions.

Article XV: Amendments

1. Any State Party may propose amendments to this Convention. Any State Party may also propose changes, as specified in paragraph 4, to the Annexes of this Convention. Proposals for amendments shall be subject to the procedures in paragraphs 2 and 3. Proposals for changes, as specified in paragraph 4, shall be subject to the procedures in pa

graph 5.

2. The test of a proposed amendment shall be submitted to the Director-General for circulation to all States Parties and to the Depositary. The proposed amendment shall be considered only by an Amendment Conference. Such an Amendment Conference shall be convened if one third or more of the States Parties notify the Director-General not later than 30 days after its circulation that they support further consideration of the proposal. The Amendment Conference shall be held immediately following a regular session of the Conference unless the requesting States Parties as for an earlier meeting. In no case shall an Amendment Conference be held less than 60 days after the circulation of the proposed amendment.

3. Amendments shall enter into force for all States Parties 30 days after deposit of the instruments of ratification or acceptance by all the States Parties referred to under subparagraph (b) below:

(a) When adopted by the Amendment Conference by a positive vote of a majority of all States Parties with no State Party casting a negative vote; and

(b) Ratified or accepted by all those States Parties casting a positive vote at the Amendment Conference.

4. In order to ensure the viability and the effectiveness of this Convention, provisions in the Annexes shall be subject to changes in accordance with paragraph 5, if proposed changes are related only to matters of an administrative or technical nature. All changes to the Annex on Chemicals shall be made in accordance with paragraph 5. Sections A and C of the Confidentiality Annex, Part X of the Verification Annex, and those definitions in Part I of the Verification Annex which relate exclusively to challenge inspections, shall not be subject to changes in accordance with paragraph 5.

5. Proposed changes referred to in paragraph 4 shall be made in accordance with the following procedures:

(a) The test of the proposed changes shall be transmitted together with the necessary information to the Director-General. Additional information for the evaluation of the proposal may be provided by any State Party and the Director-General. The Director-General shall promptly communicate any such proposals and information to all States Parties, the Executive Council and the Depositary;

(b) Not later than 60 days after its receipt, the Director-General shall evaluate the proposal to determine all its possible consequences for the provisions of this Convention and its implementation and shall communicate any such information to all States Parties and the Executive Council;

(c) The Executive Council shall examine the proposal in the light of all information available to it, including whether the proposal fulfills the requirements of paragraph 4. Not later than 90 days after its receipt, the Executive Council shall notify its recommendation, with appropriate explanations, to all States Parties for consideration. States Parties shall acknowledge receipt within 10 days;

(d) If the Executive Council recommends to all States Parties that the proposal be adopted, it shall be considered approved if no State Party objects to it within 90 days after receipt of the recommendation. If the Executive Council recommends that the proposal be rejected, it shall be considered rejected if no State Party objects to the rejection within 90 days after receipt of the recommendation;

(e) If a recommendation of the Executive Council does not meet with the acceptance required under subparagraph (d), a decision on the proposal, including whether it fulfills the requirements of paragraph 4, shall be taken as a matter of substance by the Conference at its next session;

(f) The Director-General shall notify all States Parties and the Depositary of any decision under this paragraph;

(g) Changes approved under this procedure shall enter into force for all States Parties 180 days after the date of notification by the Director-General of their approval unless another time period is recommended by the Executive Council or decided by the Conference.

Article XVI: Duration and Withdrawal

1. This Convention shall be of unlimited duration.

2. Each State Party shall, in exercising its national sovereignty, ha the right to withdraw from this Convention if it decides that extraor nary events, related to the subject matter of this Convention, ha jeopardized the supreme interests of its country. It shall give notice such withdrawal 90 days in advance to all other States Parties, t Executive Council, the Depositary and the United Nations Secur Council. Such notice shall include a statement of the extraordina events it regards as having jeopardized its supreme interests.

3. The withdrawal of a State Party from this Convention shall not any way affect the duty of States to continue fulfilling the obligatio assumed under any relevant rules of international law, particularly t Geneva Protocol of 1925.

Article XVII: Status of the Annexes

The Annexes form an integral part of this Convention. Any referen to this Convention includes the Annexes.

Article XVIII: Signature

This Convention shall be open for signature for all States before entry into force.

Article XIX: Ratification

This Convention shall be subject to ratification by States Signator according to their respective constitutional processes.

Article XX: Accession

Any State which does not sign this Convention before its entry i force may accede to it at any time thereafter.

Article XXI: Entry Into Force

1. This Convention shall enter into force 180 days after the date the deposit of the 65th instrument of ratification, but in no case earl than two years after its opening for signature.

2. For States whose instruments of ratification or accession deposited subsequent to the entry into force of this Convention, it sh enter into force on the 30th day following the date of deposit of th instrument of ratification or accession.

Article XXII: Reservations

The Articles of this Convention shall not be subject to reservatio The Annexes of this Convention shall not be subject to reservatio incompatible with its object and purpose.

Article XXIII: Depositary

The Secretary-General of the United Nations is hereby designa as the Depositary of this Convention and shall, *inter alia*:

(a) Promptly inform all signatory and acceding States of the dat each signature, the date of deposit of each instrument of ratification accession and the date of the entry into force of this Convention, and the receipt of other notices;

(b) Transmit duly certified copies of this Convention to the Gove ments of all signatory and acceding States; and

(c) Register this Convention pursuant to Article 102 of the Cha of the United Nations.

Article XXIV: Authentic Texts

This Convention, of which the Arabic, Chinese, English, Fre Russian and Spanish texts are equally authentic, shall be deposited w the Secretary-General of the United Nations.

IN WITNESS WHEREOF the undersigned, being duly author to that effect, have signed this Convention.

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